RCRA FACILITY INVESTIGATION PHASE I REPORT

ENVIRITE CORPORATION THOMASTON, CONNECTICUT

DOCKET NO. I-90-1032
MARCH 1995

VOLUME I OF X
TEXT AND TABLES

PREPARED FOR:
Envirite Corporation
198 Old Waterbury Road
Thomaston, Connecticut 06787

PREPARED BY:
GZA GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066

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File No. 41302.7
March 1995

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

March 16, 1995
File No. 41302.7

Envirite Corporation
198 Old Waterbury Road
Thomaston, CT 06787

Attention: Mr. Stephen Smith
Vice President

Re: RCRA Facility Investigation
Phase I Report
Thomaston, Connecticut

27 Naek Road
Vernon
Connecticut 06066
203-875-7655
FAX 203-872-2416

Dear Mr. Smith:

We are pleased to submit this RFI Phase I Interim Report and Phase II Proposal. This report was prepared to satisfy requirements included in Attachment IV, Section II of the Consent Order between Envirite and the US EPA; RCRA Docket No. I-90-1032.

As we have discussed, we have not received some of the full CLP data packages from the sub-contracted laboratories. Therefore, the data validation program is not complete and the validation report (Appendix I) will be submitted at a later date under a separate cover. Based on our experience, we do not believe that the result of the validation will alter the interpretations or conclusions presented in this report. We will notify you and the EPA as soon as we have a projected data for delivery of this Appendix.

If you have any questions regarding this report or any aspect of the project, please feel free to contact the undersigned at your convenience.

A Subsidiary of GZA GeoEnvironmental Technologies, Inc.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

J. Tyler Griffith
Sr. Project Manager

Kathleen A. Cyr
Reviewer/Consultant

Thomas F. Stark
Associate Principal

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TABLE OF CONTENTS

Page

VOLUME I

TABLE OF CONTENTS, Cont.

Page

TABLE OF CONTENTS, Cont.

TABLE OF CONTENTS, Cont.

TABLES

TABLE OF CONTENTS, Cont.

VOLUME II

FIGURES

TABLE OF CONTENTS, Cont.

VOLUME III

VOLUME IV

APPENDICES

TABLE OF CONTENTS, Cont.

EXECUTIVE SUMMARY

Background

GZA GeoEnvironmental, Inc. (GZA) has prepared this RCRA Facility Investigation (RFI) Phase I Interim Report on behalf of Envirite Corporation (Envirite) of Thomaston, Connecticut, pursuant to Attachment IV, Section II of the EPA Consent Order entered into between EPA Region I and Envirite; RCRA Docket No. 1-90-1032 (EPA Consent Order). This investigation was also conducted pursuant to a Consent Order entered into between the Connecticut Department of Environmental Protection (DEP) and Envirite dated September 21, 1989. The report summarizes RFI field investigations and analytical data collected at the site, presents a preliminary public health and environmental risk evaluation (first interim deliverable), and proposes Phase II investigations.

The Envirite facility is located in Thomaston, Connecticut between Branch Brook (to the west) and Old Waterbury Road (owned by the Town of Thomaston) to the east. The Naugatuck River is located immediately east of Old Waterbury Road. To the south, the site is bounded by the Thomaston Publicly Owned Treatment Works (POTW). The area surrounding the site is primarily industrial in character.

Site History and Operations

Envirite acquired the site through the issuance of industrial development bonds by the Connecticut Development Authority (CDA) in 1975. Prior to 1975, the site was undeveloped and used as a gravel borrow and apparently, at some point, for waste disposal as well. Subsurface investigations conducted prior to Envirite's acquisition of the property identified the presence of an "oily sludge" (Pre-Envirite Waste Material) in the subsurface in the northern portion of the site. CDA reportedly excavated and removed what was believed to be the majority of the Pre-Envirite Waste Material prior to the property transfer.

The Envirite facility was constructed in 1975, and began accepting inorganic liquid wastes in October of that year, primarily from the metal finishing industry. Envirite was in active operation as a waste treatment facility from 1975 to 1990. Liquid wastes were treated in a batch process that utilized cyanide oxidation, chromium reduction, lime neutralization and sulfide precipitation. Following treatment, batches were filtered to produce (1) wastewater for discharge and (2) residual solids material having a 35% to 40% solids content. From approximately 1982 onwards, all liquid wastes were treated to federal delisting standards, such that the residual solids were nonhazardous. The wastewater, or filtrate, was discharged pursuant to and in conformity with a Connecticut Department of Environmental Protection (DEP) permit to the Town of Thomaston's adjacent wastewater treatment plant. The nonhazardous residual solids material was placed in an on-site solid waste landfill pursuant to and in conformity with landfill and groundwater discharge permits from the DEP. The landfill, which consists of five separate cells, was fully utilized and is today closed.

Environmental Setting

The geologic, hydrogeologic and surface water environmental setting at the site was characterized. Investigations included:

- Soil borings and sampling;
- Bedrock coring;
- Monitoring well installations and sampling;
- Borehole permeability testing;
- A pump test;
- Stream elevation measurements;
- Stream stage measurements;
- Stream velocity measurements;
- Surface water sampling;
- Sediment thickness measurements;
- Sediment distribution evaluation;
- Sediment sampling;
- Seepage meter testing; and
- Piezometer installations.

In general, site conditions include a bedrock highland which outcrops along the northern end of the site and a sand and gravel aquifer which thickens from the bedrock outcrops in the north to sixty feet thick in the south and southeast portions of the site. The site is bounded to the east by Old Waterbury Road and the Naugatuck River and to the west by Branch Brook and by steep sided valley walls to the west and east of the brook and the river, respectively.

Surface water flow is from the north to south and stream flux measurements indicate the brook and river are likely recharging the aquifer (at least seasonally) adjacent to the Envirite site. Groundwater flow patterns in the overburden are generally from the northeast to the southwest following the bedrock contours. Flow patterns also reflect control from transient sources (like the streams). Average water table and piezometric head measurements indicate groundwater is affected by recharge from the Naugatuck River in the northern portion of the site resulting in flow from the northeast to the southwest.

Hydraulic conductivity estimates for the aquifer range between 1.4E-2 ft/sec and 1.1E-2 ft/sec. The average horizontal gradient at the site is 0.001 to 0.01 ft/ft and the estimated average linear velocity of groundwater is 4.8 ft/day to 34.6 ft/day.

Results of the RFI

Source Characterization

Pre-Envirite Waste Material: Analytical results from the Pre-Envirite Waste Material indicate that they contain a variety of organic and inorganic constituents. Average concentrations of detectable metals constituents typically range from 0.1 mg/kg to 1,000 mg/kg. Maximum concentrations were typically in the 1.0 mg/kg to 1,000 mg/kg range. Average concentrations of detectable organic compounds, and volatile organic compounds in particular, were quite high. Average concentrations typically ranged from 1.0 mg/kg to 1,000 mg/kg with maximum concentrations in the 10,000 mg/kg range. The majority of the Pre-Envirite Waste Material is located at or below the water table.

The extent of the Pre-Envirite Waste Material was to be determined based on soil boring results. These results indicate that 55 percent of the known volume of this material is located off the Envirite property to the east. The borings were extended beyond the Envirite property boundary to the east as far as the paved surface of Old Waterbury Road. Samples from the borings indicate that the deposit extends under the road. Since the paved road was in existence when Envirite acquired the site, it is clear that the material was deposited in the ground before Envirite's operation. Since the material extends under Old Waterbury Road, the full extent of the material could not be determined to the east.

Landfilled Treatment Residues: Consistent with available information regarding the origins of the landfilled residues and previous testing, the predominant compounds present in the treatment residues are metals with average mass concentrations between 1.0 mg/kg and 2,000 mg/kg. Maximum concentrations were typically in the 10,000 mg/kg range. In contrast, average concentrations for detected organic constituents typically ranged from 0.1 mg/kg to 1.0 mg/kg. Landfill treatment residues were observed to be located above the water table consistent with the design of the landfill.

A tabular comparison of the maximum concentrations of a few key parameters is shown below:

Parameter	Pre-Envirite Waste Material (mg/kg)	Landfilled Treatment Residues (mg/kg)
Methylene Ethyl Ketone	2,100	0.22
Trichloroethylene	3,300	0.70
Tetrachloroethene	3,100	7.1
Benzene	30	3.9
Toluene	15,000	0.21
Ethyl Benzene	3,100	1.8
Xylene	16,000	0.61

We conducted leaching tests in order to characterize the mobility of chemical constituents to migrate from the treatment residues using the synthetic precipitation leach procedure (SPLP). Analytical results from mobility testing indicate that the landfill constituents are not generally mobile. The average detectable metals concentrations in the extract were in the 0.001 mg/l to 0.1 mg/l range with maximum concentrations in the 0.1 mg/l range. The average detectable organic constituent concentrations in extract were in the 0.001 mg/l to 0.01 mg/l range with maximum concentrations in the 0.01 mg/l range. The low mobility of these constituents combined with the closed nature of the landfill cells indicate that the treatment residues are not a significant source of releases.

Other AOC Areas: Analytical testing of soils from the rest of the facility indicated the presence of relatively lower concentrations of a variety of constituents. While the results of metal and organic analyses indicate some level of impact to soils at selected areas at the site, the overall mass of constituents present appears to be low relative to other areas investigated. Concentrations detected in SPLP extract from these soils were also quite low and do not indicate significant impacts from these areas to other media of concern.

Analytical results from background sampling locations were tabulated and reviewed. The results appear to indicate that the locations selected for background comparisons are unaffected by the Envirite site.

Groundwater Impacts

Groundwater data indicate that, in general, the highest concentrations of organic constituents were found in monitoring well MW-30 and well cluster MW-31. These wells are located immediately downgradient of the Pre-Envirite Waste Material and, based on the data collected, indicate that the Pre-Envirite Waste Material is the predominant source of organic constituents at the site.

The next highest concentration of organic constituents in groundwater was observed in deep overburden and bedrock wells located in the southwest corner of the site. Observed groundwater flow paths and the relative concentrations of constituents observed in these wells indicate that these constituents originate from the Pre-Envirite Waste Material and migrate to the southwest and downward across the site.

Groundwater data also indicate that concentrations of copper, nickel, and zinc are highest in wells MW-43D, MW-44D and MW-44B, located at the downgradient property line. Data for pH levels in these wells is typically one to one and a half units lower than the rest of the site as well. These wells are located immediately downgradient of areas impacted by an on-site acid spill that occurred in 1983. The spill is the likely source of these constituents in the wells since the observed metal constituents and depressed pH are typical of the composition of the material released, and constituent concentrations are decreasing over time (as reported in Envirite's last several Annual Monitoring Reports), which indicate that impacts are from a historic release rather than an on-going source.

Groundwater analytical data indicate that the highest observed concentrations of barium, cadmium, cobalt, iron, and vinyl acetate were found in off-site wells located at the POTW. Also, as documented in a December 1990 report entitled "Report on Investigations at the Thomaston Sewage Treatment Plant, Thomaston, Connecticut" prepared for the town by HRP Associates of Plainville, Connecticut, elevated concentrations of sodium and sulfate have been found in groundwater at the POTW. The POTW has been present at this location since the 1960's and has historically treated industrial wastewaters. Past management practices included storing treatment sludges in unlined, uncovered stockpiles on-site. Analytical results reported in the HRP report indicated that the stockpiles contained cadmium, iron, sodium, sulfate, and other inorganic constituents.

Surface Water Systems

In general, organic and inorganic constituents were present in upgradient surface water samples at similar concentrations to those found downgradient of the site in both Branch Brook and the Naugatuck River.

Sediment sampling results indicate that, in general, upgradient concentrations of organic and inorganic constituents were equivalent to downgradient concentrations in Branch Brook. The results of sediment sampling in the Naugatuck River indicate that, in general, upgradient and downgradient concentrations of organic constituents were equivalent. However, concentrations of inorganic constituents increased downgradient of the site. Hydrogeologic data collected during this investigation indicate that the Envirite site is not the source of these increased concentrations since groundwater flow patterns indicate that flow on the site is predominantly to Branch Brook. We note that the Thomaston POTW does discharge to the Naugatuck River within the zone where sediment samples were collected.

Bioassessment

Consistent with the results of the hydrogeologic investigations and the results of surface water and sediment sampling, the aquatic communities in both rivers appear healthy.

The results of the bioassessment indicate that two sampling locations on the Naugatuck River were assessed to be "slightly impaired" in the Fall sampling round. However, we do not believe these results are due to impacts from the Envirite facility since groundwater flow data indicate the Envirite facility is not impacting the Naugatuck River.

In the Spring sampling round, one station on Branch Brook fell just below the "non-impacted" category. However, this station was bracketed by non-impaired stations and the marginally lower result is believed to be related to the cyclic changes in the habitat caused by the activities of beavers.

Proposed Phase II Investigations

Based on the data collected, it is our opinion that, with two exceptions, we have adequate data to meet the objectives of the RFI.

The first exception relates to two underground spill containment tanks that have been closed and unused since 1984. These tanks probably should be removed and the surrounding soil retested.

The second area which is still outstanding is an assessment of the full extent, nature and composition of the off-site Pre-Envirite Waste Material. Envirite would like to discuss with EPA who would be responsible for assessing the off-site, Pre-Envirite Waste Material since Envirite does not own the property nor were they responsible for the placement of these materials.

1.0 INTRODUCTION

This Phase I Interim Report and Phase II Proposal has been prepared by GZA GeoEnvironmental, Inc. (GZA) on behalf of Envirite Corporation (Envirite) pursuant to Attachment IV, Section II of the EPA Consent Order entered into between EPA Region I and Envirite; RCRA Docket No. I-90-1032 (EPA Consent Order). The work conducted to compete the Phase I investigation was conducted in accordance with:

- The January 17, 1991 RCRA Facility Investigation Work Plan Proposal (RFI Work Plan) prepared for Envirite by Fuss & O'Neill, Inc. of Manchester, Connecticut;
- The September 30, 1993 Letter from the US EPA approving the January 19, 1991 Work Plan (including Attachments A, B, and C);
- The October 15, 1993 letter from Crowell & Moring of Washington D.C. to the EPA summarizing discussions and agreements reached at the October 14, 1994 meeting between Envirite and the EPA;
- The November 10, 1993 letter from the EPA to Envirite Corporation responding to Crowell & Moring's letter of October 15, 1993;
- The March 2, 1994 Alternative Proposals for the RFI prepared by Geraghty & Miller, Inc. on behalf of Envirite;
- The proposed clarifications discussed in Envirite's April 8, 1994 monthly report submitted to the EPA;
- The April 14, 1994 letter from the EPA to Envirite responding to selected portions of the modifications proposed in the March 2, 1994 and April 8, 1994 submittals; and
- The April 28, 1994 letter from GZA to the EPA summarizing discussions and agreements reached during an April 15, 1994 conference call between the EPA and Envirite.

This investigation was also conducted pursuant to a Consent Order entered into between the Connecticut Department of Environmental Protection (DEP) and Envirite, dated September 21, 1989. This report presents the following information:

- A description of the site history and operations (Sections 1.1.1 through 1.1.3);
- A characterization of the environmental setting of the site including: the geology (Section 2.0); the hydrogeology (Section 3.0); nearby surface water and sediment (Section 4.0); and stream ecology and habitat (Section 5.0);

- A characterization of potential source areas (Sections 6.0 through 8.0);
- A summary and discussion of analytical data collected during Phase I (Section 9.0);
- An interim Public Health and Environmental Risk Evaluation (Appendix J); and
- A proposal for Phase II investigations (Section 10.0).

GZA

This report is subject to the Limitations in Appendix A.

1.1 GENERAL FACILITY DESCRIPTION

Envirite Corporation (formerly Liqwacon Corporation) operated a hazardous waste treatment facility and hazardous and solid waste disposal facility in Thomaston, Connecticut from 1975 until 1990 (Liqwacon Corp. changed its name to Envirite Corp. in 1982). A site Locus Plan is included as Figure 1-1. Envirite and EPA Region I entered into a Consent Agreement issued under Section 3008(h) of the Resource Conservation and Recovery Act (RCRA) requiring Envirite to investigate the nature, rate, and extent of migration of potential releases of hazardous constituents from the solid waste management units at the facility. The following sections present a summary of existing data concerning site history and operations.

1.1.1 Site Description

The Envirite facility is located between Branch Brook and the Naugatuck River in the southern portion of the Town of Thomaston, Connecticut. A Site Plan is included as Figure 1-2. The southwestern portion of the property is located in the Town of Watertown, as shown on Figure 1-2. Branch Brook flows from north to south through the western edge of the Envirite property. The Naugatuck River flows from north to south and lies less than 100 feet east of the site. Old Waterbury Road lies between the site and the Naugatuck River. The two rivers are approximately 700 feet apart at the site. The Thomaston publicly owned treatment works (POTW) and transfer station are located immediately south of the Envirite facility. The two primary features of the Envirite site are a 12,000 square foot storage and treatment building and surrounding materials handling areas, and a 5 acre solid waste landfill (see Figure 1-2).

1.1.2 Site History

The Sanborn Fire Insurance Maps from the early 1900's indicate that there was no commercial or industrial activity on the site at this time. During this same period, a tramway ran along Old Waterbury Road. A 1929 map of the right-of-way for this line indicates no activity at the site. Aerial photos of the Town of Thomaston indicate that in 1940 there was no industrial or commercial activity at the site.

Aerial photos from 1965, 1970, and 1975 show that the site was used as a gravel borrow. Mounds of material and heavy equipment appear in these photos. The borrow and fill operations were operated by Savin Brothers, a local construction contractor. The operation was located in this area because of the alluvial sand and gravel deposited between Branch Brook and the Naugatuck River. Based on discussions with Envirite personnel, the site was subsequently used to dispose of debris produced by the construction of Route 8 which runs parallel to the site to the west. The debris may have been placed in the open pit excavation left by the removal of sand and gravel. The debris consisted mostly of blast rubble that contained boulders and rock pieces (3 to 5 feet in diameter) and reportedly covered 85-90 percent of the site.

The Connecticut Development Authority financed the construction of the Envirite facility through the issuance of industrial development bonds and held title to the property from 1975 until November 1994. The CDA held title as security to ensure Envirite's repayment of industrial development bonds which financed the facility construction. During this period, Envirite operated the site pursuant to a lease agreement with the Connecticut Development Authority.

Prior to Envirite's operations at the Thomaston site, in 1975 Minges Associates was hired by Envirite to investigate the suitability of the site as a solid waste disposal area. A copy of the Minges report dated January 31, 1975 is included in Appendix B. In order to investigate subsurface drainage and to evaluate potential impacts on groundwater and surface water, Minges Associates completed five test borings and three seepage test pits on the site In a seepage pit near the northeast corner of the site, a deposit described as "oily sludge" was discovered. Additional excavations were completed in the area, eventually showing that the sludge deposit was 2 1/2 to 4 feet thick and covered an area approximately 40 feet by 125 feet (Minges). The then estimated extent of this Pre-Envirite Waste Material is shown on Figure 1-2.

The majority of the oily sludge (Pre-Envirite Waste Material) was reportedly excavated and removed in 1975 by the Connecticut Development Authority (Beyus, 1985). The Minges report states that the Pre-Envirite Waste Material "was later learned to be waste material from a solvent recovery operation." This may refer to a former operation by Solvents Recovery Service Corporation (1947-1955) located on the east bank of the Naugatuck River opposite the Envirite site. Historic records and aerial photographs indicate that a bridge across the Naugatuck River was located at Envirite's northern property boundary, and could have facilitated transport and disposal from across the river.

In 1981, several monitoring wells were installed on the site. During the installation of well MW-31 near the northern gate (Figure 1-2), a one foot layer of rubbery material was encountered at a depth of fourteen feet. This layer was described as "dried paint" in the well log (Appendix D). Well MW-31 is located outside the Envirite property line and Envirite has not used this area for the storage of treatment residues. The "dried paint material" was also outside the limits of the waste material delineated by Minges. There

was some similarity between the Pre-Envirite Waste Material described by Minges and that found outside the property boundary in boring MW-31, although it is not known with certainty if the "dried paint" is a continuation of this area or a separate area. Based on historic data, both areas contain Pre-Envirite Waste Materials unrelated to Envirite's post-1975 operations.

1.1.3 Adjacent Land Use

The area within a 1/2-mile radius of the facility contains three major land uses. The area to the west and south is mostly State forest. This area is heavily wooded, with no commercial or residential activity. The Thomaston Dog Pound, the POTW, and mixed solid waste transfer station are immediately adjacent to the south (downgradient) of the site. To the east, north (upgradient) and northwest, land use is a predominantly industrial in character, although there are a few residences in the area. There are no known residential or industrial users of groundwater for drinking water purposes.

The properties upgradient of Envirite along Old Waterbury Road include a number of metal finishing industries. These include Central Connecticut Cable Company, Port-O-Let, and Eyelets for Industry. Across from Envirite on the eastern bank of the Naugatuck River lies Whyco Chromium Company and Summit Metals, who are a major metal plating operation in addition to sporadic residential uses.

1.1.4 Operations History

This section presents a summary of Envirite's historic operations at the Thomaston site. A more detailed discussion of these operations was presented in the current Assessment Summary Report (Sections 1.0 and 13.0) of the approved RFI Work Plan.

The Envirite facility was constructed in 1975 and began accepting liquid wastes for treatment and disposal from a variety of industrial clients that year. In general, the facility received acidic, alkaline, and neutral wastes which contained metals and cyanides. The facility received only liquid wastes and pumpable slurries. The waste treatment processes used at the site were substantially the same throughout the facility's active operations. Wastes were unloaded from tank trucks parked on the concrete materials handling areas outside the building and transferred into tanks in the storage and treatment building. Inside the building the wastes were treated on a batch basis using cyanide destruction and hexavalent chromium reduction followed by neutralization and precipitation. Treatment produced a slurry with high water content which contained mostly insoluble metal-sulfide complexes. This slurry was filtered, with the filtrate discharged to the sanitary sewer system (under a DEP permit) and it was then treated at the adjacent Thomaston POTW on Old Waterbury Road. The filtered residues were placed in an on-site landfill permitted by DEP's Solid Waste (Landfill permit) and Water Compliance (groundwater discharge) units.

In 1980, Envirite expanded the landfill area to accommodate the volume of treatment residues being produced. After filling the excavations north of the building (Cells 1, 2 and 3), treatment residues were placed in the area west of the storage and treatment building (Cell 4). Prior to the effective date of the first RCRA regulations (November 1980), these treatment residues in Cell 4 were relocated to Cells 1, 2, and 3.

GZA

After the effective date of the first RCRA regulations, Envirite received listed and characteristically hazardous wastes for treatment and disposal pursuant to "interim status" authorization. Under EPA's 1980 interpretation of the RCRA regulations, the treatment residues produced at the site were classified and managed as hazardous wastes because they were derived from hazardous wastes. As a result of the vacation of the "mixture" and "derived from" rules in 1993, there is a legal question as to whether this area (Cell 4) is a RCRA regulated unit, but this report proceeds on the assumption that it is. Treatment residues produced after the effective date of RCRA were placed in a well- defined area of the landfill (Cell 4) separate from the pre-RCRA residues located in Cells 1, 2 and 3. In June 1981 Envirite submitted a petition to the EPA asking that the treatment residues produced at the site be delisted, or classified as non-hazardous wastes. In December 1981, the EPA granted this petition, stating that the residues produced by the treatment of certain specific waste codes would be delisted (51 Fed. Reg. 36,719 [Dec. 16, 1981]). As a condition of this temporary exclusion, Envirite was required to regularly test the treatment residues for leachable metals and cyanides to demonstrate that they met a series of conditions intended to ensure that the treatment residues did not present a threat to human health and the environment.

Envirite filed a timely Part A application with the DEP and EPA which listed the site as a treatment, storage and disposal facility. In 1983, Envirite submitted a Part B application to the EPA. This Part B application was revised on several occasions. In 1982, Envirite submitted a groundwater monitoring program to the DEP and the EPA. The RCRA monitoring program was designed to monitor releases from the portion of the landfill, which was being managed as a RCRA-regulated hazardous waste unit (Cell 4). Additional monitoring wells were installed in subsequent years in response to regulatory requirements. In November 1986, Envirite submitted a groundwater quality assessment plan to the EPA. The assessment plan was implemented in 1987, and has been maintained continuously thereafter.

In October 1984, the Connecticut DEP authorized the expansion of the landfill to the area south of the storage and treatment building (Cell 5). Envirite began filling this area with delisted non-hazardous treatment residues soon after. In October 1984, the DEP also renewed Envirite's groundwater and sewer discharge permits. Both the solid waste and the discharge permit required the installation of additional wells to monitor possible groundwater impacts.

In November 1985, Envirite submitted a final petition for the exclusion of its treatment residues. In November 1986, EPA granted a permanent exclusion to the treatment residues produced at Envirite (51 Fed. Reg. 41323 [November 14, 1986]). This exclusion included several additional waste codes beyond those listed in the 1981 exclusion. The final exclusion was conditional on testing for organic compounds, and the metals testing required by the 1981 exclusion.

In December 1986, Envirite submitted a revised Closure Plan for the RCRA-regulated hazardous waste portion (Cell 4) of the landfill (in response to EPA review comments). The Closure Plan included design and construction details for a cap placed over the hazardous waste area and the delisted treatment residues above it. A Post-Closure Plan was submitted concurrently with the Closure Plan. The Closure and Post-Closure Plans were revised in April 1987, and were subsequently approved by the DEP and EPA. Closure of Cell 4 was completed in accordance with the approved plan from between April and November 1988 and Closure was certified in December 1988.

Landfilling of treatment residues continued in the area south of the building (Cell 5) until May 1989. This section of the landfill was then closed in accordance with the plans submitted to the DEP in the original permit application for the solid waste disposal area. After May 1989, Envirite continued to receive and treat hazardous wastes at the Thomaston facility. The delisted treatment residues were transported to the Envirite facility in York Pennsylvania for treatment and subsequent disposal. In May 1990, Envirite suspended commercial treatment of hazardous wastes at the site.

1.2 SUMMARY OF PHASE I INVESTIGATIONS

As described in the EPA Consent Order and the approved 1991 Work Plan, Phase I investigations included:

- Soil borings and data analysis to characterize geologic setting (soils and bedrock): Section 2.0;
- Monitoring well installations, hydraulic tests, and data analysis to characterize the hydrogeologic setting (groundwater and hydraulics): Section 3.0;
- A stream survey, surface water sampling, stream gauging, sediment profiling, sediment sampling, and data analysis to characterize the surface water setting (surface water and sediment): Section 4.0;
- A biological survey of Branch Brook and the Naugatuck River to characterize the stream biota: Section 5.0;

- Soil, treatment residue and Pre-Envirite Waste Material sampling and chemical analysis to characterize potential sources of contamination: Section 6.0 through Section 8.0;

- A summary and analysis of chemical data to characterize contaminant occurrence: Section 9.0;

- A hazard identification and assessment of exposure potential as part of a public health and environmental risk evaluation (first interim deliverable): Appendix J; and

- Proposed Phase II investigations: Section 10.0.

2.0 CHARACTERIZATION OF ENVIRONMENTAL SETTING: GEOLOGY

The description of regional and site geology within this report is based on summaries included in the July, 1990 and January, 1991 Fuss and O'Neill Inc. reports: "Bedrock Aquifer Investigation, Whyco Chromium Company" and "RCRA Facility Investigation Proposal, Envirite Corporation", and on data obtained by GZA from published sources and additional field investigations.

2.1 REGIONAL GEOLOGY

The Envirite facility is located approximately 0.4 miles north of the confluence of Branch Brook and the Naugatuck River. This area is within the Branch Brook Sub-basin (Number 6910) of the Naugatuck Regional Basin (DEP, Bulletin No. 4, June, 1982). This region is part of the larger physiographic unit referred to as the Green Mountain Plateau. This region is also within the western uplands of the Connecticut Valley Synclinorium of the Iapetos Terrane (Rodgers, 1985).

2.1.1 Topography

The general topography of the western highlands consists of rolling hills with occasional steep valleys associated with the Naugatuck River and its tributaries. The topography of the area was developed during past periods of Pleistocene glaciation. Glaciation stripped away the pre-glacial surficial deposits and scoured the weathered bedrock leaving a hard, fresh bedrock surface. Exposed bedrock surfaces are found throughout the highland areas and occasionally along the Naugatuck River channel. Where not exposed, the bedrock surface is covered by glacial and/or post glacial deposits.

2.1.2 Overburden

The unconsolidated deposits overlying the bedrock surface consist of glacial till, stratified drift and glacio-fluvial deposits of the Naugatuck River. Glacial till is the most extensive deposit in the area, covering the majority of the highlands. Till may also be locally present in some of the deeper sections in the sediment filled valleys. Till deposits locally consist of an ice-deposited mixture of clay, silt, sand, gravel and boulders. Stratified drift/glacio-fluvial deposits are found almost exclusively as narrow belts in stream valleys and lowlands. These deposits are predominantly composed of stratified layers consisting of fine sand and sand and gravel with lesser amounts of silts and clays.

2.1.3 Bedrock

The U.S.G.S. bedrock map of Connecticut (Rodgers, 1985) identifies the bedrock underlying the Envirite facility as belonging to the Collinsville Formation (Mid-Upper Ordovician). The Collinsville Formation is similar or equivalent to the Reynolds Bridge Formation described by Cassie (1965) and MacGregor (1965) and to the Hitchcock Lake Member of the Hartland Formation described by Gates and Martin (1967). These formations are composed of gray-silvery, medium-to coarse grained schist and dark, fine-to-medium-grained amphibolite and hornblende gneiss.

2.2 SITE LOCALITY GEOLOGY

This description of site geology is based on field observations and subsurface boring data. The data reviewed includes boring logs for existing wells, boring logs for soil borings and monitoring wells completed as part of this RFI, and descriptions included in the RFI Work Plan.

Prior to investigations performed as part of Phase I of the RFI, there were 20 monitoring wells on site (9 shallow overburden, 8 deep overburden, and 3 bedrock). As part of the RFI, twelve new wells were installed on-site including three shallow, and two deep overburden monitoring wells, and five bedrock monitoring wells and two deep overburden wells which were installed to perform a pump test (Section 3.2.5). Ten new monitoring wells were also installed off-site, including nine overburden wells (five shallow, four deep) and one bedrock well. Boring/monitoring well locations are shown on Figure 1-2.

Overburden borings were advanced using hollow stem auger techniques and samples were collected at five foot intervals using split spoons. Bedrock borings were advanced using rock core and roller bit techniques. A general description of the sampling methodologies is provided in Appendix C. Boring logs, including those available from previously completed work, are included in Appendix D.

2.2.1 Topography

The Envirite facility is located in a valley formed by the confluence of Branch Brook and the Naugatuck River. In the vicinity of the Envirite facility, the Naugatuck River is approximately 340 feet above mean sea level. The surrounding highlands range in elevation from approximately 550 to 850 feet above mean sea level; highlands east and west of the site rise as much as 500 feet in elevation within one-half mile of the site.

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2.2.2 Overburden

During the last glacial period, outwash and/or ice-contact deposition occurred in the vicinity of the site. After the glacial episode ended, the Naugatuck River and Branch Brook down-cut through these materials to the present channel elevations. During this process both rivers deposited the reworked glacial sediments along their floodplains and channels. Subsurface data from borings and field observations of sediments in the channel embankments indicate these materials are composed of waterlain sands and gravels with only trace amounts of finer materials.

A conceptual summary of the site geology is depicted in geologic cross-sections presented on Figures 2-1 through 2-4. These figures were developed using information obtained during the drilling and installation of on-site monitoring wells.

These cross-sections indicate that the site is underlain by 10 to 20 feet of blast debris from the nearby construction of Route 8. The base of these blast materials is located relatively consistently at about 320 feet to 325 feet in elevation MSL, below which the water table occurs. These blast materials consist of angular crystalline bedrock ranging in size from gravel to large boulders.

Underlying this man-made fill, naturally occurring soils ranging in thickness from about zero to 60 feet are encountered, generally thickening toward the southwest. These soils consist of tan-brown fine to coarse grained sands and gravels with trace amount of silt. These soils are relatively aerial uniform. However, a gray, fine sand unit was encountered at monitoring wells MW-36, MW-44S and MW-44D overlying the tan-brown fine to coarse sand unit. Glacial till deposits, characteristically found blanketing the bedrock surface in the uplands, were not encountered in the well borings.

The available data from drilling on the POTW property indicate that the overburden materials there are similar to those encountered at the Envirite facility, consisting of fill overlying a fine to coarse sand unit. The vertical extent of the fine to coarse sand unit has not been well defined at the POTW because no bedrock drilling was done, although bedrock was encountered approximately 75 feet below grade at boring MW-58D and 51 feet below grade at boring MW-59D. Available logs of the deep overburden wells on the POTW property, including MW-56D, MW-58D, MW-59D, are consistent with a general trend of thickening overburden materials toward the southwest as observed at the Envirite facility.

2.2.3 Bedrock

Published data indicate that the Reynolds Bridge Formation (Hartland Formation) in the region of the Envirite facility is characterized by isoclinal folding with long planar limbs and sharp hinges. Strike and dip of the foliation layering ranges from approximately north-northwest to north-northeast and 20 degrees to 35 degrees west-northwest, respectively (MacGregor, 1965, and Rodgers, 1985).

GZA reviewed available bedrock investigation reports and boring logs from the neighboring Whyco Chromium facility, located across the Naugatuck River approximately 1,000 feet south and downstream along the Naugatuck River. The available information indicates the Reynolds Bridge Formation is present there, striking roughly north-south and dipping approximately 20 degrees westward. Fuss and O'Neill (1990) reported that observation of a single rock core from this facility indicated that bedrock was fresh and slightly to moderately fractured with predominantly closely spaced, gently dipping slightly weathered joints. However, several joints in the top three feet of the core were reportedly steeply or sub-vertically dipping and moderately weathered. In addition, depths of casing driven into the bedrock during the completion of other wells could indicate a weathered bedrock zone 5 to 20 feet in thickness. Surficial bedrock mapping completed during the Whyco Chromium investigation indicated that five sets of joints are present in the vicinity. The predominant joint sets are shallowly dipping and have northeast to southwest attitudes, although northwesterly-trending, steeply dipping joints were also common.

Bedrock exposures of gneiss are located within 0.25 miles west, north and east of the Envirite facility. A roadcut in the vicinity of the Reynolds Bridge reveals gneiss consisting of interlayered sequences of fine-to-coarse grained amphibolitic and granitic bands, ranging in thickness from one inch to several feet.

GZA observed bedrock cores retrieved from borings completed at the Envirite facility. Bedrock was encountered during the installation of monitoring wells MW-30, MW-31D, MW-31B, MW-32D, MW-37B, MW-41D, MW-41B, MW-43D, MW-44D, MW-44B, MW-51D, MW-51B, MW-52D, MW-53D, MW-55B, MW-58D, MW-59D, MW-61D, MW-61B, MW-62B and extraction well EX-1 at the Envirite facility. Bedrock core runs were completed on wells MW- 31B, MW-37B, MW-41B, MW-42B, MW-44B, MW-51B, MW-55B, MW-61B and MW-62B. Coring logs indicate the bedrock composition was similar to that observed at the roadcut in the vicinity of Reynolds Bridge and typically contained fresh or slightly weathered fractures.

Based on the available cores from on-site borings, a bedrock surface contour plan was prepared (Figure 5-5). The bedrock surface ranges in depth from zero to about 70 feet on-site, generally sloping downward toward the southwest. This general trend is modified by a local depression in the north-central portion of the site, immediately north of the Envirite facility building. This depression is exaggerated by the presence of an adjacent, relatively flat bedrock ridge, near the east-central border of the site and the Envirite facility

parking lot fronting on Old Waterbury Road. Bedrock is composed of gneiss containing fresh or slightly weathered fractures at the surface. Fractures ranged in dip from horizontal to 40 degrees, although sub-horizontal dips were most common. Strikes were not available for all of these cores, however, based on available data including studies of nearby outcrops and bedrock investigations completed at the Whyco Chromium facility, the dominant joint orientation is believed to be northeast-southwest.

3.0 CHARACTERIZATION OF ENVIRONMENTAL SETTING: HYDROGEOLOGY

This description of site hydrogeology is based on field observations and subsurface boring data. The data reviewed includes boring logs for existing wells, boring logs for soil borings and monitoring wells completed as part of the RFI, and descriptions included in the RFI Work Plan.

3.1 REGIONAL HYDROGEOLOGY

The Envirite facility is located within the Branch brook Sub-basin (Number 6910) of the Naugatuck Regional Basin (DEP Bulletin No. 4, June 1982). The Naugatuck River Valley is located in the western highlands of Connecticut. The facility is approximately 0.4 miles north of the confluence of Branch Brook with the Naugatuck River (Figure 1-2).

3.1.1 Overburden

The natural overburden deposits located in the vicinity of the Envirite facility are described in the U.S.G.S. Water Resource Bulletin No. 19 (1974) as glacial till and stratified drift. The reported saturated thickness of these deposits are 10 to 40 feet. Glacial till is a relatively low permeability formation and as described above, was not detected in site borings and therefore, is not discussed in this section. Stratified drift deposits in the vicinity of the site are mapped as having transmissivities between 2,700 and 10,500 square feet per day.

3.1.2 Bedrock

The bedrock underlying the Naugatuck River has been subdivided into two types by the U.S.G.S. (1974) based on geological and hydrological differences. The first type, which is characteristic of that underlying the Envirite facility, is crystalline bedrock. The second is composed of reworked (sedimentary) volcanic rock.

Except for the weathered zone of the upper portion of the bedrock, the unit is essentially impermeable. Groundwater within the bedrock moves mainly along fractures and/or joints which are predominantly located within the upper few hundred feet of bedrock. However, productivity of the bedrock differs widely from location to location since the size and distribution of fractures and joints are irregular. The U.S.G.S. (1974) reports that based on well yield data from 294 bedrock wells installed throughout the Naugatuck Valley the medium yield of a producing well is 5 to 6 gallons per minute (gpm) and approximately 75 percent yielded three gpm or less.

3.2 SITE INVESTIGATION/DATA COLLECTION

3.2.1 Monitoring Location Installations

Prior to investigations performed as part of Phase I of the RFI, there were 20 monitoring well borings on site (9 shallow overburden, 8 deep overburden, and 3 bedrock). As part of the RFI, 10 new wells were installed on-site (3 shallow, 2 deep, and 5 bedrock) and 10 additional wells (5 shallow, 4 deep, and 1 bedrock) were installed off-site. Also, two wells (MP-1 and EX-1) were installed to facilitate an on-site pump test discussed in Section 3.2.5.

3.2.1.1 Monitoring Well Installations

During this investigation, hydrogeologic data was collected from 40 monitoring wells located on-site and off-site. Table 3-1 summarizes the installation details of the monitoring wells including elevations for top of the PVC well pipe, bottom of PVC (base of well) and screened interval. The geologic strata (i.e., shallow overburden,, or shallow bedrock) monitored by the wells are also shown on Table 3-1. The well locations are shown on Figure 1-2.

Overburden monitoring wells were installed using hollow-stem auger techniques and bedrock wells were installed using rock coring and roller bit techniques. Installation and development methods are described in Appendix C. Boring logs and well completion details are included in Appendix D.

3.2.1.2 Monitoring Point Installations

Monitoring point MP-1 was installed by GZA Drilling during August 4 and 5, 1994 to provide an additional monitoring point for the pump test (Section 3.2.5). The well screen was installed from the bottom of the boring, at approximately 38 feet below grade, to 11 feet below grade (Table 3-1).

3.2.1.3 Extraction Well Installations

Extraction well EX-1 was installed by GZA drilling during August 19 through 26, 1994. The well was advanced to 22 feet in depth using a down-hole hammer and was advanced from 22 feet to the bottom of the boring using a 6-inch hollow stem auger. Soil samples were collected at five foot intervals using a two-foot long split spoon sampler. A four inch diameter stainless steel well screen (No. 30 slot) and riser were installed after completion of the boring. The well screen was installed from the bottom of the boring, at approximately 54 feet below grade, to 21 feet below grade (Table 3-1).

Soil samples from the adjacent monitoring point (MP-1) were submitted for sieve analysis and the results were used to design an appropriate filter pack for well EX-1. Filter sand was placed in the annular space around the well screen from 21 feet to 54 feet below grade. A three foot thick bentonite seal was placed above the filter sand, and the remainder of the annular space was backfilled with drill cuttings to within one foot of the ground surface. The well was finished with a cemented-in-place locking standpipe.

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3.2.2 Aquifer Materials

A conceptual summary of the subsurface is depicted on geologic cross-sections presented as Figures 2-1 through 2-4 and site locality geology is described in Section 2.2. The site has an overburden aquifer composed of fine to coarse sands overlying fractured bedrock. The unsaturated zone at the site is 10 to 20 feet thick and consists of gravel to boulder sized bedrock blast debris from the nearby construction of Route 8.

3.2.3 Borehole Permeability Tests

Borehole permeability tests were performed in on-site and off-site monitoring wells to evaluate localized hydraulic conductivity characteristics of the aquifers. Between June 14 and June 22, 1994, tests were performed in twenty-seven monitoring wells located on the Envirite property and on the Thomaston POTW property. Table 3-2 presents a list of the wells tested and a summary of the results.

Test wells were selected to provide thorough areal coverage of the site and the adjacent property for both overburden and bedrock monitor wells. Thirteen of the available wells were not tested because they were located near other tested wells that were of similar screen lengths and depths.

The borehole permeability testing was performed by variable head methods and/or constant head methods. Testing was performed using an above ground centrifugal pump to remove water from each well until either a constant depressed water level was established or until the water level in the well was drawn below the pump intake (variable head test). Data collected during a steady drawdown test included: (1) the static water level prior to the test, (2) the depressed water level during the test, and (3) the pumping rate. Data collected during variable head tests included: (1) the static water prior to the test, (2) the drawdown after pumping (start of recovery), and (3) time and depth to water measurements during well recovery.

The borehole permeability test methodology is presented in Appendix C, and test data are presented in Appendix E. Results of the borehole permeability tests are summarized on Table 3-2. Statistical analyses of the data indicate the average hydraulic conductivity of the shallow overburden is generally equal to that of the deep overburden, and that the bedrock hydraulic conductivity is significantly lower than that of the

overburden materials. Both shallow and deep overburden hydraulic conductivities are relatively consistent across the site, ranging between 2.2E-4 to 4.4E-3 ft/sec in the shallow overburden and 2.1E-4 to 8.3E-3 ft/sec in the deep overburden. These values are characteristic of medium to coarse sand, gravel. or sand and gravel mixes. Bedrock hydraulic conductivities were more variable, ranging from 1.8E-7 to 1.4E-3 ft/sec. This range of values likely represents varying degrees of fracturing/weathering which occurred in the shallow bedrock. A statistical comparison of shallow and deep overburden and bedrock permeabilities indicate that at the 95 percent confidence level, the shallow and deep overburden are likely related to each other (i.e. they are the same aquifer) while the bedrock is likely not.

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3.2.4 Step Test

A preliminary step test was performed on December 19, 1994 to evaluate the withdrawal rate capacity of well EX-1 for the subsequent pump test. Only one extraction well and one monitoring point were installed in preparation for these tests. The remainder of the monitoring wells used were part of Envirite's existing well network. Installation of the monitoring point (MP-1) and the extraction well (EX-1) are described in Sections 3.2.1.2 and 3.2.1.3. The step test methodology is further described in Appendix C.

Water level data and graphs of flow rate versus drawdown from the step test are provided in Appendix E. Based on these results, GZA estimated that a 63 gallon per minute withdrawal rate could be sustained for the three day pump test.

3.2.5 Pump Test

A pump test was performed to evaluate the large-scale hydrologic behavior of the aquifer. The extraction point used for the test was located at the southern, downgradient border of the Envirite property roughly equidistant from the Naugatuck River and Branch Brook (see Figure 1-2). The pump test was performed on December 20 through December 23, 1994 and recovery was monitored through December 27, 1994.

The pump test methodology is described in Appendix C. Tables of the data and graphs of the time/drawdown and distance/drawdown data are included in Appendix E. Results of the pump test analyses are summarized in Table 3-3.

3.2.5.1 Analytical Procedures

The time/drawdown data collected during the pump test and recovery tests were evaluated using standard analytical procedures. Data from wells EX-1, MP-1, MW-42S, MW-43S and MW-43D were analyzed using equations for pump test analysis in unconfined aquifers developed by Thiem, Theis and Cooper/Jacob. Analyses was performed using Microsoft EXCEL for Windows and the AQTESOLV, version 1.1 aquifer test analytical software package developed by the Geraghty & Miller Modeling Group of Reston, Virginia. Additional information on analytical methods is provided in Appendix E. Results are summarized below.

3.2.5.2 Transmissivity/Hydraulic Conductivity/Specific Yield

The average (mean) estimate of transmissivity based on time/drawdown data (Jacob, Thiem and Recovery Methods) is approximately 26 feet^2/minute, which corresponds closely to the median value which is approximately 20 feet^2/minute (Table 3-3). Assuming an average saturated thickness of 30 feet, these values yield hydraulic conductivities ranging between 1.4E-2 ft/sec and 1.1E-2 ft/sec. Although these values are higher than the overburden estimates obtained from the borehole permeability tests (2.1E-4 to 8.3E-3), they are still characteristic of relatively similar materials (coarse sand or gravel materials). The transmissivity estimates derived from the steady-state Thiem method (Table 3-3) average 1.2 feet^2/minute with a median of 0.8 feet^2/minute (hydraulic conductivities of about 4.4E-4 ft/sec to 6.7E-4 ft/sec). Based on these results, we estimate the average hydraulic conductivity at the site to range from 1.4E-2 ft/sec to 1.1E-2 ft/sec.

As shown in Tables 3-2 and 3-3, there are differences within the hydraulic conductivity estimates obtained from the borehole permeability tests, and those obtained from the transient pump test. However, the borehole permeability tests were performed using monitoring wells which are not designed for efficient transmission of groundwater. Therefore, tests in these wells would be expected to underestimate the hydraulic conductivity of aquifer materials at the site.

Since the overburden aquifer is unconfined, specific yield estimates were derived from the steady-state Thiem method and range between 2.3E-1 and 2.1E-0. Based on typical literature values, the specified yield typically varies from 0.01 to 0.30 in unconfined aquifers. Specific yield cannot exceed the actual pore volume of a soil (generally less than 35 percent), therefore, based on these results, we estimate the specific yield at the site to be on the order of 2.0E-1.

3.2.5.3 Area of Influence

The reliability of piezometric head contours for use in evaluating the area of influence during the pump test is expected to be poor, because the drawdowns induced by pumping were relatively minor compared to changes in piezometric head caused by unrelated influences such as stream stage. These influences can not be readily corrected due to their spatial variability at the site. However, the Thiem analyses of the pump test data indicates that the radius of influence about the extraction well EX-1 ranges between 30 and 300 feet at a withdrawal rate of 63 gallons per minute. Calculations performed to derive this estimate are included in Appendix E. Since no measurable effects were observed in wells located approximately 200 feet away (MW-41 cluster), we estimate the actual area of influence to be between 100 and 200 feet.

3.3 SURFACE WATER INTERACTIONS

The results of the pump test stream gauging are presented in tables and graphs in Appendix E. The average and standard deviation, or variability, of the gradient estimations are also shown. The vertical gradients between stream and overburden monitoring points would be expected to have increased under the influence of the pump test, due to the withdrawal of water and associated head drop in the overburden beneath the streams. However, the pump test withdrawal rates were apparently not sufficient to achieve a radius of influence that extended to the streams.

As shown on the charts included in Appendix E, the stream heads are related to piezometric heads in nearby overburden wells. The curvatures of head scatter-plots indicate transient effects unrelated to the pump test and are likely induced by a decreased stream surface elevation. The overall trend of these plots suggests a linear relationship between stream stage and overburden head which indicates that the hydrologic behavior of the aquifer is linked to the streams (i.e. recharge from the Naugatuck River or Branch Brook). This finding is supported by groundwater flow patterns discussed in Section 3.40 and stream gauging information discussed in Section 4.1.

3.4 GROUNDWATER FLOW PATTERNS

Groundwater flow patterns at the site have been evaluated based on the hydraulic characteristics discussed in Section 3.2 and on groundwater contour plans (Figures 3-1 through 3-16). The figures present both "snap shot" and averaged data for the site. As discussed in Sections 3.2, groundwater flow appears to be strongly affected by stream stage and other transitory effects (i.e. underflow from the valley walls). Therefore, the most representative data for interpretation of flow patterns at the site are the historic averages presented on Figures 3-4, 3-8 and 3-12 through 3-16.

Based on averaged data (Figures 3-4 and 3-8), groundwater flow patterns in the overburden aquifer indicate that flow from the northeastern portion of the site is influenced by recharge from the Naugatuck River (see Section 3.3) and by the presence of a bedrock ridge in the vicinity of the treatment building. Groundwater in this portion of the site flows to the west, towards Branch Brook. Overburden groundwater flow at the rest of the site flows to the south and southwest towards monitoring well clusters MW-43 and MW-44. On the Thomaston POTW property (downgradient), overburden groundwater flow is to the south and southeast.

In contrast to the overburden aquifer, horizontal flow in bedrock does not appear to be influenced by recharge from the river. Flow directions in bedrock are also generally to the south and southwest.

Averaged data, as presented on the contour plans, indicate that horizontal gradients in overburden at the site average approximately 0.001 ft/ft to 0.01 ft/ft. Based on average hydraulic conductivity estimates (1.4E-2 to 1.1E-2 ft/sec) and literature values for porosity (25%), the average horizontal linear velocity is estimated to be 4.8 ft/day to 34.6 ft/day using the average linear flow rate equation (Freeze and Cherry, 1979).

As shown on the piezometric cross-sections (Figures 3-13 through 3-16), groundwater flow in the northern portion of the site is primarily horizontal. However, in the southern portion of the site, averaged piezometric head data indicate a downward component of flow. Piezometric contours on Cross-Section D-D' (Figure 3-16) indicate that the downward flow component is most pronounced along the southwest boundary of the site. This pattern of flow is indicative of a strong groundwater recharge from Branch Brook (see Sections 3.3 and 4.1).

Groundwater piezometric data indicate that flow in the bedrock is generally horizontal with the exception of the southwest portion of the site. Recharge effects from Branch Brook appear to create a downward component of flow into bedrock in this portion of the site.

4.0 CHARACTERIZATION OF ENVIRONMENTAL SETTING: SURFACE WATER AND SEDIMENT

In compliance with Attachment IV, Section I.D.1.c of the EPA Consent Order, a comprehensive stream survey was performed to evaluate the physical and chemical nature of surface waters and sediments from the Naugatuck River and the Branch Brook.

As described in Section 27.1 of the RFI Work Plan, the stream survey was conducted to identify and evaluate the following: 1) the physical characteristics and amount of flow in the Naugatuck River and the Branch Brook; 2) the degree of vertical and horizontal homogeneity in the water column in these rivers; and 3) the locations, thicknesses, and qualitative descriptions of river sediments. In addition, the stream survey was designed to identify all storm and industrial discharges within the survey area (shown on Figure 4-1).

Field investigations were divided into two segments: surface water and sediment.

4.1 SURFACE WATER PHYSICAL CHARACTERISTICS

Prior to making any field measurements or collecting data, six transects were established along the Branch Brook and six transects were established along Naugatuck River. The locations of these transects are shown on Figure 4-1. The transects are named Branch Brook Transect-1 through Branch Brook Transect-6 (BBT-1 through BBT-6) and Naugatuck River Transect-1 through Naugatuck River Transect-6 (NRT-1 through NRT-6).

The rationale for the locations of each transect is set forth in the "Alternative Proposals for RFI" document produced by Geraghty & Miller, Inc., September 30, 1993. Primary transects were established on both the Naugatuck River and the Branch Brook at or near the property boundaries and approximately 500 feet downstream of the site. The primary transects were identified as BBT-2, BBT-3, BBT-4, NRT-2, NRT-3 and NRT-4. Their locations were slightly adjusted to best meet criteria established by the USGS for measuring stream velocities as indicated in the Field Methods Appendix. Staff gauges were installed in the rivers at each of the primary transects as discussed in the Work Plan. Data to be collected at each primary transect included: width and depth of flow, stream bottom sediment characterization, stream bottom elevation, and water quality data (pH, specific conductance, dissolved oxygen and temperature).

Three additional transects (secondary transects) were established along each of the rivers. NRT-1 and BBT-1 were located approximately 500 feet upstream of NRT-2 and BBT-2, respectively. NRT-5 and BBT-5 were located approximately 1,000 feet downstream of the facility, while NRT-6 and BBT-6 were located approximately 1,500 feet downgradient of the facility. Data to be collected at each secondary transect included: stream bottom sediment characterization, stream bottom elevation, stream width, and stream depth.

4.1.1 Naugatuck River

4.1.1.1 Streamflow Measurements

Streamflow measurements were collected at the primary transects of the Naugatuck River at high flow (May 3, 1994) and low flow (October 4, 1994) periods. Velocity measurements, stream width measurements, and stream depth measurements were collected in accordance with the protocol outlined in Appendix C.

Velocity measurements, stream depth measurements, and stream width measurements for each primary transect are included on tables titled "Discharge Data" in Appendix E. The discharge data tables were used to calculate the total discharge in cubic feet per second (cf/s) at each transect. The discharge rates were calculated in accordance with protocols outlined in Appendix C and at the bottom of each of the discharge data tables.

The total discharge in cf/s for the Naugatuck River primary transects during high flow and low flow time periods is presented in Table 4-1. Table 4-1 also includes staff gauge elevations as well as the change in streamflow (cf/s), the percentage change in streamflow from upgradient to downgradient transects (%), and the estimated recharge of the streams per linear foot of stream (cf/s).

As shown on Table 4-1, during May, flow was observed to decrease between stations NRT-2 and NRT-3 (-5.8%) and slightly increase between NRT-3 and NRT-4 (+0.9%). The cumulative change in discharge measured between the upper (NRT-2) and lower transect (NRT-4) was -4.9%. During October, flow was observed to decrease between NRT-2 and NRT-3 (-12.8%). The cumulative change in discharge from NRT-2 to NRT-4 was -21.5%. A loss of stream flow between the upper and lower transects indicates that the stream is losing water to the aquifer in this area.

The accuracy of the stream gauging method used is estimated to be ± 5% to 8% of the total flow (ASTM, 1990). Using this range of accuracy, the percent change in discharge observed in May was too small (-4.9%) to draw conclusions about changes in flow. However, the percent change in discharge observed in October was large enough (-21.5%) to suggest that this reach of the Naugatuck River was recharging water to the aquifer.

This assertion is further supported by the presence of an unnamed tributary to the Naugatuck River which enters the stream from the east between NRT-2 and NRT-3. This stream was observed to be flowing to the Naugatuck River in May and October and should therefore bias downgradient flow measurements to the high side rather than the low side. Measurement of a net loss in flow despite the streams contribution lends support to the conclusion that the Naugatuck River recharges groundwater at least part of the year.

4.1.1.2 Seepage Meters

Seepage meters were not installed in the Naugatuck River due to the lack of thickness of fine grained sediment.

4.1.1.3 Chemical and Physical Parameters (Water Quality)

Chemical and physical parameters including temperature, pH, dissolved oxygen and specific conductivity were measured at each of the primary transects of the Naugatuck River to evaluate mixing and the degree of homogeneity in the stream, as described in Section 27.1.1 of the RFI Work Plan. This preliminary sampling was performed to determine whether multiple surface water samples were to be collected at each surface water sample location.

Between May 2 and May 4, 1994, pH, temperature, dissolved oxygen, and specific conductivity measurements were collected at NRT-2, NRT-3 and NRT-4 in accordance with the protocols outlined in Appendix C. These analyses were performed using a submersible probe in a flowing stream and 1 to 2 percent variations in measurements were commonly observed at each point monitored. The results of the preliminary water quality sampling for the Naugatuck River are presented in Tables 4-2A, 4-2B and 4-2C, and on Figure 4-2A. The results of

limited statistical analyses are also presented on the tables. The results indicate that the Naugatuck River is well mixed, and that water quality is very consistent at each transect. The standard deviation of each parameter set at each transect was between 0.1 and 2 percent of the mean for the data set.

Therefore, based on the uniformity of the data, multiple samples were not collected at any of the surface water sample locations along the Naugatuck River, except for QA/QC duplicates.

4.1.1.4 Dispersion Zone Calculations

The dispersion zone is defined as the distance over which mixing occurs until a recharge volume is completely mixed. It is advantageous to collect surface water samples within the dispersion zone to ensure that maximum concentrations are measured.

As described in Section 27.2.1 of the RFI Work Plan, dispersion zone lengths were calculated based on elevation measurements at the primary transects along the Naugatuck River. The results of these calculations and the equation used to develop the length of each dispersion zone downgradient of the primary transects are presented on Table 4-3. Dispersion zone lengths for the Naugatuck River varied from 11,469 feet to 117,131 feet during low flow and from 15,158 feet to 93,235 feet during high flow.

The purpose of calculating the lengths of the dispersion zones was to ensure that at least two surface water samples were collected within the dispersion zone downgradient of the primary transects. The shortest dispersion length along the Naugatuck River is greater than 10,000 feet. Samples SWNW-07 and SWNW-08 were collected within this zone. As shown on Figure 4-3 (Surface Water Sample Locations), downgradient sources, such as the Thomaston POTW outfall (600 feet downgradient of the Envirite property line), the Whyco Chromium outfall (approximately 750 feet downgradient of the Envirite property line), and a stormwater outfall (approximately 150 feet downgradient of the Envirite property line) are located within the dispersion zone and may have an impact on the water quality of the river.

4.1.1.5 Surface Water Sample Collection

Eight surface water sample locations were identified along the Naugatuck River. Two sample locations were located upstream of the facility, three adjacent to the facility, and three downstream of the facility. Surface water sample locations were not restricted by dispersion zone data discussed in Section 4.1.1.4 due to the length of the dispersion zone along the Naugatuck River. Surface water samples were collected during two events: spring (June 6, 1994) and fall (September 20 and

October 3, 1994). Samples were collected in accordance with the protocols outlined in Appendix C. Multiple samples were not collected at any locations, with the exception of QA/QC duplicates, because of the uniformity of the water discussed in Section 4.1.1.3.

4.1.2 Branch Brook

4.1.2.1 Streamflow Measurements

Streamflow measurements were collected at the primary transects of the Branch Brook at high flow (April 28, 1994) and low flow (October 5, 1994) periods. Velocity measurements, stream depth measurements, and stream width measurements were collected in accordance with the protocols outlined in Appendix C. The discharge rates to the brook in cf/s were calculated as previously explained in Section 4.1.1.1.

The total discharge in cf/s for the Branch Brook primary transects during high flow and low flow time periods is presented in Table 4-1. Table 4-1 also includes staff gage elevations as well as the change in streamflow (cf/s), the percentage change in streamflow from upgradient to downgradient transects (%), and the estimated recharge per linear foot of stream (cf/s).

As shown on Table 4-1, during April, flow was observed to decrease between Stations BBT-2 and BBT-3 (-15.8%) and also between Stations BBT-3 and BBT-4 (-3.4%). The cumulative change in discharge measured between the upper (BBT-2) and lower transects (BBT-4) was -19.2%. During October, flow was observed to decrease between BBT-2 and BBT-3 (-18.6%) and increase between BBT-3 and BBT-4 (5.7%). The cumulative change in discharge from BBT-2 to BBT-4 was -12.9%. A loss of stream flow between the upper and lower transects indicates that the stream is loosing water to the aquifer in this area.

As previously stated, the accuracy of the stream gauging method is estimated to be between $\pm$ 5% to 8% of the total flow. The percent changes in discharge during April (-19.2%) and October (-12.9%) are significant enough to suggest that this reach of Branch Brook (between BBT-2 and BBT-4) is recharging water to the aquifer.

4.1.2.2 Seepage Meters

Three seepage meters were installed in the Branch Brook on May 27, 1994. Branch Brook Seepage Meter-1 (BBSM-1) was installed at Branch Brook Transect-3 (BBT-3), BBSM-2 was installed 175 feet downstream of BBT-3, and BBSM-3 was installed 260 feet downstream of BBT-3, as indicated on Figure 4-1. The seepage meters consisted of two foot diameter metal drums (standard 55 gallon drums) cut

in half. Only bottom sections of drums were used. A through full fitting connected to 1/2-inch polyethylene tubing with a brass valve attached to the end was inserted into the bottom of the drum. The meters were installed by sliding the open end approximately 12 inches into the stream bed.

The seepage meters were not used to collect water samples for chemical analyses, however, the seepage meters were sampled for discharge information. Seepage measurements were collected in accordance with protocols established in Appendix C. BBSM-1, BBSM-2 and BBSM-3 were tested on June 8, 1994. Location BBSM-3 was retested on October 8, 1994. With an assumed area of discharge of 20,000 square feet (the area of stream bottom between BBT-2 and BBT-3), approximately 121 ft^3/day (908 gpd) of water was calculated to be recharging the stream based on data collected from BBSM-1. Approximately 94 ft^3/day (706 gpd) of water was calculated to be recharging the stream based on data collected from BBSM-2. The June measurements at BBSM-3 were incorrect due to a defective seal. BBSM-3 was resampled on October 8, 1994. With an assumed area of 20,000 square feet, approximately 97 ft^3/day (727 gpd) of water was calculated to be discharging from the stream to the groundwater. Calculations for these discharge rates are presented in Appendix C.

The results of seepage meter measurements indicate that at some portions of the Branch Brook channel may discharge groundwater to the stream, at least seasonally. However, the measured volumes were very small in comparison to the total flow of the brook (measured to be 33,000 gpm to 85,000 gpm). It should be noted that well over 90 percent of the stream channel was covered with cobbles and was not suitable for seepage meter installations. Therefore, fluxes estimated from seepage meter data may not be representative of the stream as a whole. However, these data, combined with the stream flux data and the groundwater piezometric data, provide a representative picture of the brook as a groundwater recharge source which may periodically (seasonally) reverse discharge directions.

4.1.2.3 Chemical and Physical Parameters (Water Quality)

Chemical and physical parameters including temperature, pH, dissolved oxygen and specific conductivity were measured at each of the primary transects of the Branch Brook to evaluate mixing and the degree of homogeneity in the stream, as described in Section 27.1.1 of the RFI Work Plan. This preliminary sampling was performed to determine whether multiple samples were to be collected at each surface water sample location.

On April 28 and 29, 1994, pH, temperature, dissolved oxygen, and specific conductivity measurements were collected at BBT-2, BBT-3 and BBT-4 in accordance with the protocols outlined in Appendix C. The results of the preliminary water quality sampling for Branch Brook are presented in Tables 4-2D

through 4-2F, and on Figure 4-2B. Also presented on the tables are the results of limited statistical analyses. The results indicate that Branch Brook is well mixed and that water quality is very consistent across each transect. The standard deviation of each parameter set at each transect was between 0.3 and 2 percent of the mean of the data set. These analyses were performed using a submersible probe in a flowing stream and 1 to 2 percent variations in measurements were commonly observed at each point monitored.

Therefore, based on the uniformity of the data, multiple samples were not collected at any surface water sample locations along the Branch Brook, with the exception of QA/QC duplicates.

4.1.2.4 Dispersion Zone Calculations

As described in Section 27.2.1 of the RFI Work Plan, dispersion zone lengths were calculated based on elevation measurements at the primary transects along the Branch Brook. The results of these calculations and the equation used to develop the length of each dispersion zone downgradient of the primary transects and are presented on Table 4-3. Dispersion zone lengths for the Branch Brook primary transects varied from 201 feet to 2,395 feet during low flow and from 426 feet to 2,785 feet during high flow.

The purpose of calculating the lengths of the dispersion zones was to ensure that at least two surface water samples were collected within the dispersion zone. With the exception of the dispersion zone downgradient of primary transect BBT-3 in October, surface water sample locations for the Branch Brook, designated on Figure 4-3, met this criteria. During the summer of 1994, a beaver constructed a dam approximately 70 feet upgradient of transect BBT-4. Subsequently, the stream flow patterns and elevations were altered from the dam to a point upstream of BBT-3. The change in flow patterns shortened the dispersion zone downgradient of BBT-3 by approximately 50%. This resulted in only one of the surface water sampling locations (SWBW-06) lying within the calculated dispersion zone downgradient of BBT-3.

Although this change in the Branch Brook environment altered the length and location of the dispersion zone, for the purpose of consistency, low flow surface water samples were collected from the same locations as they were during high flow.

As shown on Figure 4-3, other potential sources such as stormwater outfalls from Route 8 are located within the dispersion zones and may have an impact on water quality in Branch Brook. In addition since the surface water recharges the aquifer, the groundwater could also be impacted by these at outfalls.

4.1.2.5 Surface Water Sample Collection

Ten surface water sample locations were identified along the Branch Brook. Three sample locations were located upstream of the facility, three adjacent to the facility, and four downstream of the facility. Surface water samples were selected to meet April 1994 dispersion zone data discussed in Section 4.1.2.4 of this report. Surface water samples were collected during two events: spring (June 6, 1994) and fall (September 21 and October 3, 1994). Samples were collected in accordance with the protocols outlined in Appendix C. Multiple samples were not collected at any locations, with the exception of QA/QC duplicates, because of the uniformity of the water discussed in Section 4.1.2.3.

4.2 SEDIMENT

The sediment evaluation was designed to map the characteristics of the river beds at each primary and secondary transect of the Branch Brook and Naugatuck River, as well as additional intermediate sampling locations. The purpose of the evaluation was to determine sediment sampling locations for contaminant characterization.

4.2.1 Naugatuck River

4.2.1.1 Fine Grained Sediment Distribution

Soft sediment depths were measured across each of the six Naugatuck River transects between May 2 and May 10, 1994, following the protocols outlined in Appendix C. In addition, soft sediment depths were determined at twenty-one intermediate sampling locations (NRI-01 through NRI-21) between the Naugatuck River transects as depicted on Figure 4-4. The intermediate locations were selected to provide good spatial coverage and were biased towards quiescent, depositional areas. Qualitative descriptions of the sediment, using the Burmister Soil Classification System, were also performed at each of the transects and intermediate sampling locations.

Soft sediment thicknesses were evaluated by advancing a 1/2-inch diameter rod through the sediments until it encountered refusal. The results of the soft sediment determinations and the qualitative descriptions are provided in Tables 4-4A through 4-4F (transects NRT-1 through NRT-6) and Table 4-4M (Naugatuck River Intermediate Sampling Locations). Soft sediment thicknesses are also shown on Figure 4-4; while, profiles for each Naugatuck River transect, depicting soft sediment depths and soil classifications, are provided as Figures 4-5AA and 4-5AB In general, the soft sediments observed varied in thickness from 0 to 1.9 feet and consisted of light to dark brown, grey, and olive fine to medium sand and silt.

Areas of fine grained sediments were identified and ten preliminary sampling locations were determined along the Naugatuck River in areas of similar sediment thickness and appearance. Three of the ten samples were established from the primary transects because more information regarding the river and sediment is known at these locations (NRT-02 through NRT-04). The remaining seven locations were selected as follows: NRI-05, NRI-09, NRI-11, NRI-13, NRI-17, NRI-18 and NRI-20. These locations were selected in accordance with Section 27.1.2 of the RFI and "Alternative Proposals for RFI" (March, 1994). The RFI Work Plan specified ten preliminary sediment sample locations in areas of similar sediment depth and appearance and the "Alternative Proposal" document emphasized spatial distribution along the stream channel with at least two samples collected upstream of the facility, three samples collected adjacent to the facility, and three samples collected downstream of the facility.

4.2.1.2 Fine Grained Sediment Physical Characteristics

On May 24, 1994, sediment samples were collected from the ten preliminary sampling locations identified on the Naugatuck River. The samples were collected with a hand held sediment corer (as described in Appendix C). The samples were analyzed for grain density, grain size distribution, cation exchange capacity, total organic carbon (TOC), and pH. The results of these analyses are summarized on Table 4-5. Statistical analyses are also provided on this table. Gradation tests are included in Appendix H.

The results indicate that the data for each sample analysis lay within three standard deviations of the mean (of the ten samples). Based on standard statistical techniques discussed in Section 27.2.4 of the RFI, none of the samples collected along the Naugatuck River would be considered an outlier.

4.2.1.3 Chemical Constituent Characterization

Consistent with the Work Plan, eight of the ten sample locations were selected for chemical constituent characterization. Sample NRT-03 (collected from Naugatuck River Transect #3) was excluded due to its higher grain density and coarse grain size distribution (sieve description), while NRI-17 was excluded due to broad coverage downstream of Envirite's southern property boundary. The eight sample locations selected for characterization are shown on Figure 4-6. Analytical results are summarized in Section 9.0 of this report.

4.2.2 Branch Brook

4.2.2.1 Fine Grained Sediment Distribution

Soft sediment depths were measured across each of the six Branch Brook transects between April 26 and May 12, 1994, following the protocols outlined in Appendix C. In addition, soft sediment depths were determined at 30 intermediate sampling locations (BBT-01 through BBT-30) between the Branch Brook transects as depicted on Figure 4-4. The intermediate locations were selected to provide good spatial coverage and were biased towards quiescent, depositional areas. Qualitative descriptions of the sediment, using the Burmister Soil Classification System, were also performed at each of the transects and intermediate sampling locations.

Soft sediment thicknesses were evaluated by advancing a 1/2-inch diameter rod through the sediments until it encountered refusal. The results of the soft sediment determinations and the qualitative descriptions are provided in Tables 4-4G through 4-4L (transects BBT-1 through BBT-6) and Table 4-4N (Branch Brook Intermediate Sampling Locations). Soft sediment thicknesses are also shown on Figure 4-4; while profiles for each Branch Brook transect, depicting soft sediment depths and soil classifications, are provided as Figure 4-5B. In general, the soft sediments observed varied in thickness from 0 to >6 feet and consisted of light to dark brown, grey, and olive fine to coarse sand and silt.

Areas of fine grained sediments were identified and ten preliminary sampling locations were determined along the Branch Brook in areas of similar sediment thickness and appearance. Three of the ten samples were established from the primary transects (BBT-2 through BBT-4) because more information regarding the river and sediment is known for these locations. The remaining seven locations were selected as follows: BBI-02, BBI-04, BBI-10, BBI-12, BBI-17, BBI-24 and BBI-28. These locations were selected in accordance with Section 27.1.2 of the RFI Work Plan and "Alternative Proposals for RFI" G&M March 2, 1994. The RFI Work Plan specified ten preliminary sediment sample locations in areas of similar sediment depth and appearance and the "Alternative Proposal" document emphasized spatial distribution along the stream channel with at least two samples collected upstream of the facility, three samples collected adjacent to the facility, and three samples collected downstream of the facility.

4.2.2.2 Fine Grained Sediment Physical Characteristics

On May 23, 1994, sediment samples were collected from the ten preliminary sampling locations identified on the Branch Brook. The samples were collected with a hand held sediment corer (as described in Appendix C). The samples were analyzed for grain density, grain size distribution, cation exchange capacity, total organic carbon (TOC), and pH. The results of these analyses are summarized on Table 4-5. Statistical analyses are also provided on this table. Gradation tests are included in the Laboratory Analytical Data Appendix.

The results indicate that the data for each sample analysis lay within three standard deviations of the mean (of the ten samples). Based on standard statistical techniques as discussed in Section 27.2.4 of the RFI, none of the samples collected along Branch Brook would be considered an outlier.

4.2.2.3 Chemical Constituent Characterization

Eight of ten samples were selected for chemical constituent characterization. Samples BBT-02 (collected from Branch Brook transect #2) and BBI-28 were excluded due to coarse grain size distribution (sieve description). The eight sample locations selected for characterization are shown on Figure 4-6. Analytical results are summarized in Section 9.0 of this report.

5.0 BIOASSESSMENT OF BRANCH BROOK AND NAUGATUCK RIVER

This bioassessment of the benthic invertebrate and fish communities of Branch Brook and the Naugatuck River was conducted as a joint effort between GZA and LEC, Inc. of Bourne, Massachusetts. The assessment was conducted in accordance with EPA Rapid Bioassessment, Protocol III (EPA, 1989). The fish evaluation consisted of a qualitative survey of fish species present within these waterways in the vicinity of the site.

5.1 BENTHIC INVERTEBRATE BIOASSESSMENT

Bioassessment is a method for evaluating the health of an aquatic system and/or the impacts of pollution by sampling the biota of the ecosystem. The bioassessment conformed with the EPA (1989) Protocol III methodology which is the most rigorous of the EPA Protocols. Protocol III involves sampling of benthic (bottom-dwelling) macroinvertebrates at sites of potential impact and at reference sites which have similar habitat characteristics and are assumed to be unimpaired. Invertebrate organisms are identified to the lowest taxonomic level practical (generally genus) and the composition and structure of the invertebrate community at each site is evaluated using a set of indices or "metrics". Some of these metrics incorporate scientific data on the environmental requirements and pollution ecology of benthic invertebrates generated from previous studies. Comparison of the metrics from a reference site to sites of potential impact enables impairment of biological conditions in the study area to be evaluated.

The study areas were within Branch Brook (BB sample designations) and the Naugatuck River (NR sample designations) in Thomaston, Connecticut adjacent to the Envirite facility. Both of these systems have areas where water flows turbulently over cobble and gravel substrates known as "riffle" habitats. Riffle habitats support the greatest diversity of benthic macroinvertebrates and, therefore, are the focus of sampling efforts according to Protocol III (EPA, 1989). A total of four stations consisting of riffle habitat were sampled on each system (see Figure 5-1); one upstream of the landfill (reference stations BB-R1 and NR-R1 in Branch Brook and Naugatuck River respectively) and three adjacent to and at varying distances downstream of the landfill (adjacent stations BB-A1, BB-A2, and BB-A3 in Branch Brook, and NR-A1, NR-A2, and NR-A3 in the Naugatuck River).

Spring and fall sampling rounds were performed; the spring sampling was conducted on May 19 and 20, 1994, and the fall sampling was conducted on October 18 and 19, 1994. Spring and fall sampling rounds were evaluated separately and tables developed for evaluation are presented separately. Table 5-1 presents the physical habitat characteristics at each sampling location in both waterways. Tables 5-2 through 5-5 present invertebrate data collected and the calculations of the bioassessment metrics for the spring sampling round. Tables 5-6 through 5-9 present invertebrate data collected and the calculations of the bioassessment metrics for the fall sampling round.

5.2 HABITAT CHARACTERISTICS

In the study area, Branch Brook consists of a well-defined channel that varies from 30 to 50 feet wide (Table 5-1). The stream banks are generally 1 to 3 feet high and are stabilized by vegetative growth, especially alders. The flow of water in Branch Brook alternates between relatively rapid flow over cobble and gravel in turbulent riffle areas to slower, non-turbulent flow in pools and "glide" areas where substrates are composed of sand.

A beaver dam exist just upstream of Station BB-A2. During the spring sampling, this dam was in disrepair and appeared to have relatively little affect on stream flow. However, at the time of the fall sampling round, the dam had been rebuilt and the altered hydrology affected physical characteristics of two sampling station.

After the dam was rebuilt, elevated water levels eroded a portion of the stream bank as the water flowed around the edge of the dam. This erosion deposited sand and fine gravel within BB-A2, thus altering the habitat characteristics relative to the spring sampling round. The dam also backed water up to station BB-A1 so that the lower stretch of BB-A1 which had been riffle habitat during the spring sampling round was now pooled water. Therefore, during the Fall round, sampling station BB-A1 was limited to the upstream portion of the area shown on Figure 5-1.

The Naugatuck River is a much larger system than Branch Brook and, in the study area, consists of a straight, broad channel with a relatively flat bottom. This channel morphology results in fairly uniform water depths and minimal pool habitat. Substrate composition is predominantly cobble and gravel as in Branch Brook, but generally with higher percentages of sand and a greater degree of embeddedness than in the smaller system (Table 5-1).

5.3 FIELD AND LABORATORY METHODS

Samples of the benthic macroinvertebrate fauna were collected at each station using a technique known as kick sampling. This technique entails the use of a D-frame aquatic net (mesh = 0.6 mm) which one person holds against the stream substrate with the mouth of the net facing upstream. A second person positioned upstream within one or two feet of the net kicks at the substrate, dislodging macroinvertebrates into the current and the net while moving slowly upstream. The net handler follows closely behind the "kicker" and keeps the net in the path of disturbance. The current continually sweeps organisms into the net until the procedure is terminated.

All organisms captured in the net were collected and preserved in 70% ethanol. The procedure was repeated until a minimum of 100 organisms were collected (at BB-A1 a miscount resulted in the collection of only 95 organisms). When available for at a station, samples of Coarse Particulate Organic Matter (CPOM) were also collected for identification of macroinvertebrates belonging to the functional feeding group known as "shredders" (EPA, 1989). However, due to the patchy distribution of this microhabitat and the minimal fauna found associated with it, the metric derived from analysis of CPOM shredders was omitted from the calculations.

In the laboratory, most macroinvertebrates were identified to genus. LEC identified all organisms collected, instead of taking a 100-organism subsample from each original sample as specified in Protocol III (EPA, 1989). Although this results in a range of totals from each station varying from 95 to 158 organisms at any particular station, processing of the entire sample insures that each genus is represented in direct correspondence to its relative abundance in the sample. Seven metrics were calculated for each station based on the sample data. The results from reference stations (upstream of the landfill) were compared to adjacent stations (sites of potential impact) according to the procedures specified in Protocol III (EPA, 1989).

5.4 RESULTS

5.4.1 Spring 1994

Tables 5-2 through 5-5 present the evaluation of data collected in the spring. A total of 48 taxa were identified in kick samples from Branch Brook and the Naugatuck River (Table 5-2). The Naugatuck River exhibited the greatest diversity with a total of 36 macroinvertebrate taxa and a relatively even distribution of percent contribution among taxa. Much of this diversity can be attributed to midges (Chironomidae, Diptera) and mayflies (Ephemeroptera); each represented by nine genera. All major orders of aquatic insect are represented in the Naugatuck River except stoneflies (Plecoptera).

A total of 21 taxa were collected in Branch Brook and the community in this system is dominated by two taxa; the mayfly *Drunella* and, secondarily, the caddisfly *Hydropsyche* (Table 5-3). Species richness in Branch Brook is less than in the Naugatuck River mostly due to a decrease in representation by midges, with only one genus of midges observed in Branch Brook. All major orders of aquatic insect are represented in Branch Brook except beetles (Coleoptera). Nine taxa were observed in both Branch Brook and the Naugatuck River with the following three taxa occurring commonly: *Isonychia* (Ephemeroptera), *Cheumatopsyche* (Trichoptera), and *Hydropsyche* (Trichoptera).

5.4.2 Fall 1994

Tables 5-6 through 5-9 present the evaluation of data collected in the fall. A total of 30 taxa were identified in kick samples from Branch Brook and the Naugatuck River (Table 5-6). Much of this diversity is attributable to mayflies (Ephemeroptera) and caddisflies (Trichoptera); represented by seven and six genera respectively. Nine taxa were

observed in both Branch Brook and the Naugatuck River with the following three taxa occurring commonly: *Isonychia* (Ephemeroptera), *Cheumatopsyche* (Trichoptera), and *Hydropsyche* (Trichoptera). All major orders of aquatic insect are represented in Branch Brook and the Naugatuck River.

Branch Brook exhibited the greatest diversity with a total of 22 macroinvertebrate taxa (19 insect and 3 non-insect). The dominant insect order was caddisflies (Trichoptera) which had five genera and the highest number of individuals. Mayflies (Ephemeroptera) were also represented by five genera, but the number of individuals was lower. There was only one genus of stoneflies (Plecoptera), but it was fairly abundant. These three orders are indicative of well oxygenated, non-impaired stream conditions. Diptera was represented by only a few midges (chironomids) and blackflies (simuliids). The low number of these two families and the lack of other Diptera is also an indication of good conditions (Table 5-7).

A total of 19 taxa (16 insect and 3 non-insect) were collected in the Naugatuck River with the community in this system dominated by mayflies (Ephemeroptera); and, secondarily, by caddisflies (Trichoptera), and flies and midges (Diptera). Ephemeroptera is represented by four genera while Trichoptera and Diptera are represented by three genera each. Species richness in the Naugatuck River is less than in Branch Brook mostly due to a decrease in representation by mayflies and caddisflies (Table 5-8).

5.5 ANALYSIS OF COMMUNITY METRICS

The metrics calculated as part of this Protocol III Bioassessment consist of the following:

Metric 1 - Species Richness
Metric 2 - Modified Hilsenhoff Biotic Index
Metric 3 - Ratio of Scraper and Filtering Collector Functional Feeding Groups
Metric 4 - Ratio of EPT and Chironomidae Abundances
Metric 5 - Percent Contribution of Dominant Taxon
Metric 6 - EPT Index
Metric 7 - Community Similarity Index

Each of the above metrics quantifies a compositional or structural feature of the benthic community. The result for each metric calculated for the adjacent stations is given a biological condition score of 6, 4, 2, or 0 based on percent comparability to the reference station (except for Metric 5 - Percent Contribution of Dominant Taxon - for which the actual percent contribution is evaluated). An adjacent station is given a score of 6 when it is highly comparable to the reference station and scores decrease with decreasing comparability. In the final step of the bioassessment calculation, the scores are totaled and each adjacent station is assigned a Biological Condition Category based on percent comparability with the total score for the reference station. The metrics, their significance, biological condition scoring criteria, and biological condition categories are described in the EPA Rapid Bioassessment Protocols (1989; see Figure 6.3-4 on page 6-27).

Tables 5-3 and 5-4 present detailed calculations of the Modified Hilsenhoff Biotic Index (Metric 2) for data collected in the spring from the Branch Brook and the Naugatuck River respectively. Tables 5-7 and 5-8 present detailed calculations of the Modified Hilsenhoff Biotic Index for data collected in the spring from the Branch Brook and the Naugatuck River respectively. Tables 5-5 and 5-9 summarize all metrics, percent comparabilities, and biological condition scores. For each adjacent station, a Biological Condition Category is also presented.

GZA

5.5.1 Interpretation of Spring 1994 Results

With one exception, all stations within both Branch Brook and the Naugatuck River qualify as non-impaired. This means that all but one of the adjacent stations have a high degree of comparability to their respective reference station in terms of benthic community composition and structure and, therefore, have apparently not been impacted.

The one exception is Station BB-A2 which is rated just below the non-impaired category, and within the upper end of the range of "slightly impaired" according to Biological Condition Category criteria. It is because of slightly lower biological condition scores on Metrics 5, 6, and 7 that this station registers in the slightly-impaired category Table 5-5). The dominance of *Drunella* (Ephemeroptera) at this station results in a score of 0 for Metric 5 rather than the 2 scored by the reference station. A difference of two in total EPT taxa between this station and the reference station results in a score of 2 instead of the 6 scored by the other adjacent stations on Branch Brook for Metric 6. A score of 4 instead of the 6 scored by the other adjacent stations for Metric 7 is due to Station BB-A2 having only six taxa in common with the reference station even though it has only one less taxon in total.

5.5.2 Interpretation of Fall 1994 Results

With two exceptions, all stations within Branch Brook and the Naugatuck River qualify as non-impaired. This means that all but two of the adjacent stations have a high degree of comparability to their respective reference station in terms of benthic community composition and structure; and, therefore, have apparently not been impacted.

The two exceptions are Stations NR-A1 and NR-A3 which is just below the non-impaired category and within upper to mid range of range of slightly impaired according to Biological Condition Category criteria. Station NR-A1 registers slightly lower biological condition scores on Metrics 1, 3, 6, and 7 while Station NR-A3 registers slightly lower biological condition score on Metric 5.

5.6 CONCLUSIONS

Results from the spring sampling of Branch Brook indicate no impairment at stations BB-A1 and BB-A2. Results from station BB-A2 indicate slight impairment. However, physical habitat conditions at BB-A2 may under go relatively frequent disturbance due to

a beaver dam located directly upstream. Based on observations during 1994, this dam is periodically rebuilt and then let fall into disrepair. This alters the flow and sedimentation characteristics at BB-A2 and may be a factor in the slightly impaired finding for the spring data. All three stations along Branch Brook registered as non-impaired in the fall sampling.

Results from the spring sampling of the Naugatuck River find all three stations (NR-A1, NR-A2, and NR-A3) non-impaired. However, fall results indicated that two of these stations (NR-A3 and NR-A1) were slightly impaired. The data indicates that station NR-A3 demonstrates the greatest impairment, with station NR-A1 showing less impairment. Field observations of the stream environment did not indicate factors responsible for the differences for the slight impairment of NR-A1 and NR-A3. However, groundwater flow data (Section 3.0) indicate that groundwater from the site discharges toward Branch Brook and stream flow data indicate that the Naugatuck River is not receiving groundwater along this stretch of the river. Therefore, we do not believe that influences from the Envirite site are responsible for slight variations in the biological community.

5.7 QUALITATIVE FISHERIES EVALUATION

GZA and LEC collected and identified fish species in Branch Brook and the Naugatuck River during spring and fall 1994. The sampling locations paralleled the invertebrate sampling location (Figure 5-1). The spring sampling was conducted on June 22 and 23, and the fall sampling was conducted on November 2 and 3.

Fish were collected using a gasoline-powered Coffelt Model MARK-10 backpack electroshocker. The electroshocker was adjusted such that most fish would recover from the effect of the electric field in a few seconds. Stunned fish were captured with a net and placed in a bucket of water. Every five to ten minutes captured fish were identified, their lengths measured and then released. A biological collectors permit was obtained from the State of Connecticut Bureau of Natural Resources/Fisheries Division for this work.

Results of the spring and fall fish collections are presented in Tables 5-10 and 5-11 respectively.

The numerically dominant fish species in Branch Brook during both rounds of sampling was the Black Nose Dace. The Black Nose Dace is classified by the EPA Rapid Bioassessment Protocol (EPA, 1989) as a pollution tolerant species.

During both sample rounds in Branch Brook, total taxa richness (i.e., the number of species) was relatively consistent between the reference and downstream stations. In some instances, downstream stations contained a higher number of species. The percent of the dominant species, Black Nose Dace, was variable between samples, but did not indicate an impact on downstream sampling points.

Pollution tolerance classifications from EPA (EPA, 1989) for the other fish species collected in Branch Brook and the Naugatuck River as follows:

- Blue Gill (*Lepomis macrochirus*) = Intermediate,
- Longnose Dace (*Rhinichthys cataractae*) = Intermediate,
- White Sucker (*Ctastomas commersoni*) = Tolerant,
- Fall Fish (*Semotilus corporalis*) = unlisted,
- Tessellated Darter (*Etheostoma olmstedi*) = unlisted,
- Golden Shiner (*Notemigonus crysoleucas*) = Tolerant,
- Rock Bass (*Ambloplites rupestris*) = Intermediate,
- Smallmouth Bass (*Micropterus dolomieui*) = Intermediate,
- Largemouth Bass (*Micropterus salmoides*) = Intermediate,
- Pumpkinseed (*Lepomis gibbosos*) = Intermediate,
- American Eel (*Anguilla rostata*) = Intermediate,
- Brown Bullhead (*Lepomis auritus*) = Tolerant,
- Red Fin Pickeral (*Esox americanus*) = unlisted,
- Cut Lips Minnow (*Exoglossum maxillingua*) = unlisted,
- Redbreast Sunfish (*Ictalurus nebolosos*) = unlisted.

The numerically dominant fish species at the Naugatuck River reference station during Round 1 was Rock Bass, represented by three individuals. The average number of Rock Bass at downstream stations was 3.5. During Round 2, the numerically dominant fish species at the Naugatuck River reference station was the Fall Fish, represented by thirty individuals. The average number of Fall Fish at downstream stations during Round 2 was 13.6.

During Round 1, downstream stations in the Naugatuck River had higher taxonomic richness, higher numbers of individuals, and a lower percent dominance by Rock Bass compared to the reference station. During Round 2, downstream stations in the Naugatuck River had relatively even distributions of taxonomic richness and numbers of individuals. The Fall Fish was less dominant in downstream samples compared to the reference station. The sample results did not indicate any impacts on downstream points relative to upstream points and did not display patterns indicative of negative impact in the adjacent station relative to the reference station.

6.0 SOURCE AND WASTE CHARACTERIZATION: PRE-ENVIRITE WASTE MATERIAL

As discussed in Section 1.1.2 of this report, the Pre-Envirite Waste Material was first identified by Minges Associates in 1975 during a pre-purchase investigation of the current Envirite site (see Appendix B). Minges completed a seepage test pit in the northeast portion of the site to assess subsurface drainage. During the excavation, a material described as an "oily sludge" was discovered. Reportedly, subsequent test pits determined the material was approximately 2.5 to 4 feet thick and covered an area approximately 40 feet by 125 feet (Plate 55 of the RFI Work Plan). The waste material is described as "an

indeterminate area of sludge-like material which apparently contained (volatile organic compounds) VOCs" in the RFI Work Plan. The Work Plan also indicates that the "oily" sludge was thought to be waste material from a solvent recovery operation. Solvents Recovery Service operated a facility on the eastern side of the Naugatuck River, across from Envirite, during the 1940s and 1950s and at that time, a bridge across the Naugatuck River was located directly across from Envirite's northern property line.

The boring log for well MW-31 (February of 1981) indicates a one foot layer of rubbery material described as "dried paint" was found at a depth of 14 feet below grade (fbg). MW-31 is located approximately 95 feet east of the Pre-Envirite Waste Material location as described by Minges Associates.

The origin of the Pre-Envirite Waste Material is unknown. The materials which comprise the Pre-Envirite Waste Material were placed before construction of the Liquacon/Envirite facility in 1975 and may have been deposited at the site during the same period that the site was backfilled with blast rubble from the construction of Route 8, as suggested by the RFI Work Plan.

Field investigations were performed to determine the location and extent of the Pre-Envirite Waste Material and to collect samples for physical and chemical characterization. Field investigations were comprised of a soil gas survey and a series of soil borings.

6.1 SOIL GAS SURVEY

A soil gas survey was performed as a preliminary investigation tool for both the landfill and Pre-Envirite Waste Material characterizations. Investigatory methods and results are discussed in this section and Section 7.1. The EPA approved sampling program consisted of a fifty-foot sampling grid over the landfill with 80 sampling locations. Soil gas samples were collected from the overlying gravel layer and from within the treatment residues. Samples were analyzed using a field gas chromatograph. All appropriate and applicable QA/QC protocols were implemented.

6.1.1 Field Investigations

A soil gas survey involves extracting and analyzing interstitial air from a discrete interval below the ground surface. Samples are analyzed to identify and quantify the presence of VOCs. Soil gas surveys typically are conducted in a grid-like fashion in order to systematically identify and delineate an AOC.

The Pre-Envirite Waste Material soil gas survey was used to locate areas of high VOC concentrations as an indicator of the presence of underlying material sludge. Based upon the results of the survey, initial borings to locate the Pre-Envirite Waste Material were installed. A detailed description of the soil gas survey protocols is presented in Appendix C. The soil gas survey grid is depicted on Figure 6-1 and includes both Pre-Envirite Waste Material and landfill Cells 1, 2 and 3 sampling points. A bedrock outcrop prevented the sampling of locations in the northeast portion of the Pre-Envirite Waste Material grid (nodes I,2, J,1, J,2 and K,2).

6.1.2 Sampling and Analyses

From April 19, 1994 through May 13, 1994 GZA performed a soil gas survey around the area believed to be effected by Pre-Envirite Waste Material and landfill at the site. A total of 92 locations were sampled. Soil gas samples were collected at 25 foot intervals except where the sampling probes encountered obstructions. Soil gas samples were collected and analyzed for VOCs using a gas chromatograph following the protocols described in Appendix C. Numerous sampling points provided information regarding both the Pre-Envirite Waste Material and the landfill. Survey grid points were added to the south side of the original Pre-Envirite Waste Material grid proposed in the Work Plan to better define elevated soil gas concentrations in this area. Low levels of VOCs appeared to be present throughout the site area surveyed. This is likely due to volatilization of VOCs from high concentration source materials migrating through the shallow subsurface materials. Therefore, low levels of VOCs (<1 mg/m^3) detected in many areas of the soil gas grid were not interpreted to represent underlying source material. For the Pre-Envirite Waste Material soil gas survey, soil gas samples were collected from approximately 3.5 feet below grade (fbg). QA/QC practices consisted of the collection and analysis of ambient air samples, sample duplicates, and control point samples as described in Appendix F.

6.1.3 Analytical Results

Soil gas survey results are summarized in Table 6-1 and are shown on Figures 6-1 (total VOCs) and Figure 6-2 tetrachloroethene. Elevated levels of chlorinated VOCs were detected in numerous soil gas samples. Tetrachloroethene was the predominant compound identified since it was detected in every sampling point. Tetrachloroethene was detected in concentrations up to 50 mg/m^3.

Areas of elevated tetrachloroethene concentrations coincided with the occurrence of areas of elevated total VOC concentrations as depicted on Figures 6-1 and 6-2. Detected levels of total VOCs and tetrachloroethene were the greatest along the southern portion of the landfill Cell 1 and the northern edge of the northern entrance drive (up to 52 mg/m^3 total VOC and 50 mg/m^3 tetrachloroethene). These areas are in close proximity to the Pre-Envirite Waste Material. Slightly elevated levels of VOCs were also detected below the foundation of the northern portion of the facility building and the driveway areas to the north and northwest of the building below foundations. An elevated level of 1,1-DCE (>10 mg/m^3) was detected near the northern entrance gate in the vicinity of MW-31, near the Pre-Envirite Waste Material.

6.2 SOIL BORINGS

6.2.1 Field Investigations

Soil borings were installed to visually identify the extent of Pre-Envirite Waste Material and to collect samples of the material for chemical characterization and hazardous waste determination. The soil borings were performed in accordance with the RFI Work Plan. Borings were drilled using hollow stem auger methods to depths beneath the water

table or to auger refusal. Samples were collected using split spoon samplers as described in Section 7.2.2. A discussion of soil boring installation and split spoon sampling is provided in Appendix C. Complete boring logs are presented in Appendix D.

On May 26, 31 and June 2, 1994, GZA performed three soil borings (SLW-01, SLW-02 and SLW-03) to locate the Pre-Envirite Waste Material and to provide initial waste samples for chemical analysis. This data was used to develop a parameter list to characterize impacts around the Pre-Envirite Waste Material. Soil boring SLW-01 was installed near MW-31 where Pre-Envirite Waste Material had been encountered during the well installation. Soil borings W-02 and W-03 were located near the highest total VOC concentrations (28 $\mu g/m^3$ and 52 $\mu g/m^3$, respectively) detected during the Pre-Envirite Waste Material soil gas survey. Boring locations are presented on Figure 7-1.

Between October 13 and December 13, 1994, thirty-five additional soil borings were installed to delineate the Pre-Envirite Waste Material. Consistent with the RFI Work Plan, borings were installed based on a 10 foot grid. If a boring was determined to contain Pre-Envirite Waste Material, based on color, texture, and PID response, borings were installed in the four adjacent locations on the grid. If no Pre-Envirite Waste Material was identified in a boring, the grid was not continued past that boring.

Two borings (W-04 and W-05) were installed on the southern edge of the waste area described by Minges. No waste was found in this area, which supports the information contained in Section 1.1.3 of the RFI Work Plan indicating that the majority of the Pre-Envirite Waste Material was excavated and removed off-site. Borings W-06 through W-22 were drilled in the area of boring W-03 to delineate the extent of Pre-Envirite Waste Material remaining in this area.

The upper limit of the waste material found beneath the landfill residues ranged from 15 to 25.5 fbg (322.48 to 331.08 MSL). Waste was recovered in the initial split-spoon sample taken from 15 to 17 fbg in W-19. Initial samples were collected at this depth due to waste having been encountered 8.5 to 10.5 feet lower in nearby boreholes.

Borings W-23 through W-38 were installed in the vicinity of W-01 where waste material was suspected to be present due to the elevated PID readings recorded during the drilling of W-01 and the nearby location of MW-31 where "dried paint" material was observed as previously mentioned. Waste material found near MW-31 and the northern entrance gate area was initially encountered at depths of 9 to 11.5 fbg (330.58 to 324.25 MSL).

6.2.2 Sampling and Analyses

Split spoon samples were collected continuously in two foot intervals. Samples were collected from the ground surface to the top of the water table or approximately two feet below the bottom of the waste material. In borings advanced through the landfill,

samples were collected starting at depths near the bottom of the treatment residues. Once the approximate depth to the waste material was determined, continuous split spoon sampling was started at a minimum of two feet above the waste material. Samples were collected to a depth of at least two feet below the visually identified waste material. In borings where waste material was not encountered, samples were collected continuously to a depth of at least two feet below the elevation of previously encountered waste.

Seven samples of Pre-Envirite Waste Material and 41 samples of the surrounding soil were submitted for chemical analysis. In all borings where waste material was found, one soil sample from immediately above and below the waste material was analyzed with the exception of W-03 and W-09. Soil samples from above and below the waste material in borings W-03 and W-09 could not be analyzed due to the lack of sample recovered in the split spoons at these intervals. In borings where waste material was not found, a soil sample from the approximate elevation of the waste material was analyzed. Therefore, analyzed samples were collected from the soils immediately surrounding the waste material both horizontally and vertically.

All constituents detected from the Appendix IX analysis of the waste material samples from borings W-01 and W-03 were added to the preliminary parameter list to create the Appendix IX derived Pre-Envirite Waste Material list. The Appendix IX derived Pre-Envirite Waste Material parameter list included analysis for the presence of dioxin and furans. Analysis for dioxin and furans was performed on selected soil waste material and groundwater samples. Table 6-2 presents the Appendix IX derived Pre-Envirite Waste Material parameter list. This parameter list was used to analyze all samples of waste material and soil collected during the Pre-Envirite Waste Material investigation. In addition, all samples from the Pre-Envirite Waste Material investigation were analyzed for total and extractable constituents. Samples of Pre-Envirite Waste Material were analyzed using the Toxicity Characteristic Leaching Procedure (TCLP). Consistent with discussions and correspondence with the U.S. EPA, samples of the soil surrounding the waste were extracted using the synthetic precipitation leaching procedure (SPLP) for soils to evaluate impacts on environmental media. Corrosivity, reactivity and ignitability were also evaluated in selected waste material samples for hazardous waste determination.

Summaries of analytical data are included on Tables 9-1 and 9-2 (Pre-Envirite Waste Material), Tables 9-3 and 9-4 (soils around the Pre-Envirite Waste Material) and in Appendix G.

6.3 DISCUSSION

Pre-Envirite Waste Material was visually identified in eleven borings (W-03, W-09, W-11, W-15, W-19, W-24, W-25, W-27, W-30, W-32 and R-12) in thicknesses ranging from 0.3 to 8.5 feet. Table 6-3 presents waste material thicknesses and depths. Pre-Envirite Waste Material was not visually identified in boring W-10 since samples could not be recovered the boring. Therefore, boring W-11 was completed 1.5 feet north of W-10. Pre-Envirite Waste Material was encountered in W-11.

Pre-Envirite Waste Material encountered beneath the landfill residues (Cell 1) consisted of black, oily, fine to coarse sand with varying amounts of fine to coarse gravel. The material had high head-space readings on the PID (up to > 5,200) and a strong odor. Waste material encountered near the north gate entrance consisted of red, green and pink rubber-like material mixed with red or black oil. Silty soil surrounding the waste also exhibited a rubbery texture. The material had high headspace readings on the PID (up to >520.0) and a strong odor. Pre-Envirite Waste Material in W-27 was similar to the "rubbery" waste but had a hard, plastic-like texture. The chemical composition of the Pre-Envirite Waste Material is discussed in Section 9.0.

Other fill material encountered in samples collected during the Pre-Envirite Waste Material investigation included: wood, fiberboard, hemp rope, scrap metal, ashes and coal.

The horizontal extent of the Pre-Envirite Waste Material encountered beneath the landfill was approximately 25 feet in the north-south direction and 30feet in the east-west direction. The Pre-Envirite Waste Material thickness in this area ranged from 2 to 8 feet. The approximate volume of the Pre-Envirite Waste Material in this area is 55 cubic yards.

The horizontal extent of the Pre-Envirite Waste Material encountered near the north gate was approximately 55 feet in the north-south direction and 30 feet in the east-west direction. The thickness of the material in this area ranged from 2 to 8.5 feet. As shown on Figure 6-3, approximately 55% of the Pre-Envirite Waste Material delineated is located off the Envirite site. The borings were extended beyond the Envirite property boundary to the east as far as the paved surface of Old Waterbury Road. Samples from the borings indicate that the deposit extends under Old Waterbury Road. Since the paved road was in existence when Envirite acquired the site, it is clear that the material was deposited in the ground before Envirite's operation. The full off-site extent of Pre-Envirite Waste Material is unknown. The approximate volume of the Pre-Envirite Waste Material in this area located on-site is 30 cubic yards. The approximate volume of material located off-site is greater than 100 cubic yards.

7.0 SOURCE AND WASTE CHARACTERIZATION: LANDFILLED TREATMENT RESIDUES

The EPA Consent Order requires a study to characterize the Areas of Concern (AOC) listed in Attachment A to that order and as amended in the EPA Letter of September 30, 1993. The goal of the characterization is to identify the constituents which could have been released from each AOC, the form they may have been released in, and the media to which they may have been released. After each AOC has been characterized, the nature and extent of releases to the various media, if any, will be characterized as described in Sections 30.1.1, 30.1.2 and 30.1.3 of the EPA Consent Order (Contamination Characterization).

The Envirite solid waste landfill covers an area of approximately 5 acres and forms a "U" shaped ridge around the storage and treatment building (Figure 1-2). The landfill contains treatment residues generated by Envirite's treatment process and is divided into five cells. The cells consisted of unlined excavations which were filled sequentially from 1976 until 1989. The landfill was investigated during the RFI because it was identified as a suspected source of a release of hazardous constituents to groundwater. Cells 1, 2 and 3 were a focus of the investigation since these cells do not have an impermeable cap.

Cells 1, 2 and 3 were filled with alternating layers of treatment residues and sand or gravel. These Cells were capped with a one foot layer of gravel followed by six inches of seeded topsoil.

Characterization of these cells included soil borings to determine the vertical extent of treatment residues, the horizontal extent of treatment residues, and collection of treatment residue samples for analysis of their chemical composition and mobility. Field investigations included a soil gas survey, borings into Cells 1, 2 and 3 and collection of treatment residue samples for chemical analysis.

7.1 SOIL GAS SURVEY

7.1.1 Investigation Program

The landfill soil gas survey was designed to identify any apparent areas of high VOC concentrations in the landfill. Three landfill borings were to be installed in the vicinity of the highest measured VOC concentrations. The landfill soil gas survey was conducted using the grid described in the RFI Work Plan (Plate 53). Soil gas samples were collected at 50 foot intervals except where the sampling probes encountered obstructions. The soil gas survey grid is depicted on Figure 6-1 and includes sampling points over both landfill and the Pre-Envirite Waste Material sampling points.

7.1.2 Sampling and Analyses

From April 19 through May 13, 1994, GZA performed a soil gas survey of landfill Cells 1, 2 and 3, and the areas in the vicinity of the Pre-Envirite Waste Material. For the landfill survey, shallow soil gas samples were collected from the gravel layer installed above landfill residues. These samples were collected at depths from 6 to 18 inches below grade. Deeper soil gas samples were collected from the treatment residues at depths of 2.5 to 3.5 feet below grade. QA/QC practices consisted of the collection and analysis of ambient air samples, sample duplicates, and control point samples as described in Appendix F. Table 6-1 presents the soil gas data. Figure 6-1 depicts the soil gas sampling grid and total VOC results and Figure 6-2 depicts the grid and tetrachloroethene results. The soil gas data presented on these figures represents the maximum concentration detected at each point regardless of sampling depth. Maximum concentrations were contoured to evaluate areas of similar concentrations.

A total of 92 locations were sampled. Since portions of the landfill and the Pre-Envirite Waste Material area overlap laterally, several sampling points provided information regarding both areas. The survey grid was extended beyond the original grid (as shown in the RFI Work Plan) where elevated concentrations of VOCs were detected at grid edges. Low levels of VOCs appeared to be present throughout the area surveyed. In areas above the landfill this is likely due to dispersion of VOCs within the coarse gravel drainage layer of the cap. Therefore, low levels of VOCs (<1 mg/m^3) were detected in many areas of the soil gas grid and were not interpreted to represent source material immediately below these locations.

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7.1.3 Analytical Results

Low levels of chlorinated VOCs were detected in numerous soil gas samples as presented on Table 6.1. Results of the soil gas survey are presented on Figures 6-1 (total VOC) and 6-2 (tetrachloroethene). Tetrachloroethene was the predominant compound identified since it was detected in every sampling point except one (A-1). was detected in concentrations up to 50 mg/m^3. Other identified compounds included TCE, 1,1-DCE, 1,1,1-TCA and 1,2-DCA. In addition, unknown compounds were tentatively quantified by relative comparison to peaks of known standards. The upper range of total VOC levels (including unknowns) was 52 mg/m^3. In general, detected concentrations of total VOCs were higher in the deep soil gas samples (within treatment residues) than the shallow samples (overlay materials) indicating that VOCs in the treatment residues were not readily mobilized.

Areas of elevated tetrachloroethene concentrations controlled the occurrence of areas of elevated total VOC concentrations in Cells 1, 2 and 3 as depicted on Figures 6-1 and 6-2. The data shown on these figures represents the greatest concentration detected in soil gas at each point regardless of depth. Detected total VOCs and tetrachloroethene levels were the highest (up to 52 mg/m^3 total VOCs and 50 mg/m^3 tetrachloroethene) and extended over the greatest area in Cell 1.

Detected levels of total VOCs and tetrachloroethene in Cell 2 were lower than Cell 1 (up to 21 mg/m^3 total VOCs and 18 mg/m^3 tetrachloroethene) and extended over a smaller area than in Cell 1. However, portions of Cell 1 overlie Pre-Envirite Waste Material which may be contributing to higher VOC levels. Elevated VOC levels were detected in Cell 3 at three sampling locations (up to 11 mg/m^3 total VOCs and 10 mg/m^3 tetrachloroethene).

7.2 SOIL BORINGS

The purpose of the landfill borings was to collect samples of treatment residue for chemical analysis. These data were then used to characterize the waste properties. The EPA approved boring program included ten borings through the landfill residues. Treatment residue samples were collected at regular intervals for laboratory analysis. Borings were

extended to the base of the treatment residues at all locations. QA/QC practices consisted of the decontamination of all drilling equipment between boreholes using a steam cleaner and the collection and analysis of sample duplicates, equipment blanks, and inter-laboratory duplicates as discussed in Appendix F.

7.2.1 Field Investigations

From May 11 to 25, 1994, GZA drilled 10 landfill borings (L-1 to L-10) at the locations shown on Figure 7-1. Descriptions of soil boring and split spoon sampling protocols are provided in Appendix C. Complete boring logs are presented in Appendix D.

The locations of borings L-01 through L-07 were predetermined by the RFI Work Plan. Borings L-01 and L-02 were installed in Cell 1 to sample the oldest treatment residues in the landfill; borings L-03 through L-07 were installed at random locations. Boring L-08 was installed near one of the highest VOC measurements in soil gas analyses; and borings L-09 and L-10 were located to provide areal coverage of the cells. According to the RFI Work Plan, the random locations were selected by drawing a grid over the area of Cells 1 through 3, and the elements of the grid were numbered sequentially. Random numbers were then selected and correlated to the grid. However, boring L-06 was moved approximately 60 feet southwest to facilitate areal coverage of the landfill. Boring L-08 was installed in one of the areas of highest VOC concentrations measured during the landfill soil gas survey. Since borings L-01 through L-07 were already located in other areas of elevated VOC concentrations as measured by the soil gas survey, borings L-09 and L-10 were placed to facilitate areal coverage of the landfill.

The soil borings were performed in accordance with the RFI Work Plan. Landfill borings were installed using hollow stem auger methods to depths beneath the treatment residues (17 to 38 feet) or to auger refusal to determine the vertical extent of the treatment residues. Split-spoon samples were collected at five foot intervals from the ground surface to the base of the landfill borings.

7.2.2 Sampling and Analyses

Thirty-eight samples were chosen for analysis, based on the following criteria: the two deepest samples in boreholes L-01 and L-02, highest portable photoionization detector (PID) headspace reading (all borings except L-03 and L-04), and random selection. Thirty samples were randomly selected for analysis prior to the initiation of the boring program. However, only 29 randomly chosen samples were collected and analyzed since boring L-07 was shallow and produced 3 samples rather than 4 as expected. One additional treatment residue sample was collected from the landfill in the upper portion of boring W-03 (installed as part of the Pre-Envirite Waste Material investigation). This sample was collected to replace the fourth sample in L-07 and to serve as an inter-laboratory duplicate for the landfill residue analysis quality assurance program. Table 7-1 presents the sample selection criteria and the samples chosen to meet each criteria. It should be noted that numerous samples meet more than one criteria.

Of the 38 samples analyzed, six were submitted for analysis of all constituents listed in 40 CFR 264, Appendix IX. The treatment residues in Cells 1, 2 and 3 were tested for the Appendix IX parameters list was used to determine what constituents may be present in the landfill residues. Samples analyzed for Appendix IX parameters were selected because they exhibited the highest PID results from headspace screening (five total) or were selected at random (one). All other treatment residue samples (32 total) were analyzed for the predetermined preliminary parameter list described in Section 29.1.5 of the RFI Work Plan plus total cyanide. Envirite voluntarily added total cyanide to the preliminary parameter list to better understand the occurrence of this constituent at the site. The preliminary parameter list is presented on Table 7-2 and was based upon constituents typically found in the treatment residues. This starting list was expanded based on the results of Appendix IX analysis of six landfill residue samples.

Constituents detected in the Appendix IX analyses were added to the preliminary parameter list to generate the landfill Appendix IX derived parameter list. This list was used for the analysis of all landfill residues and other AOC investigation soil samples (with the exception of the Pre-Envirite Waste Material investigation). The Appendix IX derived landfill parameter list is presented on Table 7-3.

All treatment residue samples were analyzed for both total and mobile constituents. The mobility of constituents were determined using the Synthetic Precipitation Leaching Procedure (SPLP) for soils, SW846 Method 1312, to simulate the on-site leachability and long-term stability of the landfill material. Analytical results are summarized on Tables 9-5 and 9-6 and in Appendix G.

In addition to landfill residues, two soil samples, L-03A and L-10A were analyzed for VOCs. These samples were comprised of the topsoil and sand overlying the landfill residues and had the highest PID readings in their respective boreholes.

7.3 DISCUSSION

The maximum thickness of the landfill residues was determined to be approximately thirty feet at the landfill ridge line. The corresponding bottom elevation of the landfill is approximately 325 feet MSL (Table 7-4). In general, the soil and gravel cap was observed at the top of each boring. The treatment residues encountered were comprised of soft, multi-colored (black, blue, orange, white, green, etc.) sludge. The treatment residues appeared to be uniform as no clear layering or segregation based upon color or texture was evident. Materials encountered beneath the treatment residues were fine to medium grained sands and weathered bedrock.

The chemical composition of the treatment residues is discussed in Section 9.0.

8.0 SOURCE WASTE CHARACTERIZATION: ADDITIONAL AREAS OF CONCERN

Six additional areas of concern (AOC) were investigated, including:

- Storage and treatment facility;
- Two underground spill containment tanks;
- Two dry wells;
- Wastewater spill area;
- Roadway areas;
- General facility: and
- Background Areas.

Soil quality in these areas may have been affected by general transport, treatment and handling of waste material and treatment residues. Also, soil samples were collected to assess background levels of constituents near the site.

8.1 FIELD INVESTIGATIONS

The purpose of these investigations was to evaluate whether releases had occurred in the specific areas listed above. GZA drilled borings and collected soil samples in five of the six additional AOCs between November 16, 1994 and December 8, 1994. Personnel from EAS Laboratories of Watertown, Connecticut collected soil samples from the 1988 wastewater spill area on November 3 and 4, 1993. The locations of these borings are presented on Figure 7-1 and 8-1.

Soil samples were collected using hollow stem auger and split spoon techniques or by hand auger. A description of these protocols are provided in Appendix C. For hollow stem auger borings, completion logs are included in Appendix D. QA/QC practices included the decontamination of all drilling equipment between boreholes using a steam cleaner in addition to the collection and analysis of sample duplicates, and equipment blanks as described in Appendix F. Summaries of the analytical results are presented in Tables 9-7 through 9-21 and in Appendix G.

8.1.1 Storage and Treatment Facility

Two acid spills have occurred at the facility building, one in 1978 and one in 1983. Eleven soil borings (F-1 through F-11) were installed at points inside and outside the treatment and storage building. To evaluate possible impacts within the building, concrete floor samples and soil samples from beneath the floor were collected and analyzed from five locations (F-1 through F-5). There are two sumps within the building which collect material from drainage trenches running along the east and west sides of the building interior. Consistent with the RFI Work Plan, points F-1 and F-2 were located at the base of these sumps. As part of Envirite's operation, multiple layers of polymer resin had been

placed on the sump bottom where concrete sample F-1 was collected. Chemical constituents from the resin may have affected the results of the sample analysis. Concrete sample F-2 was collected in an area with cracked concrete. Sampling points F-3 through F-5 (within the building) were located as specified in the RFI Work Plan.

Samples submitted for analysis included the upper surface of the concrete floor (2 inches), and soil immediately beneath the floor. A second soil sample, was collected at a depth of 18-inches below grade.

To evaluate acid spill impacts outside the building, soil samples were collected from areas potentially impacted by the spills (sampling points F-6 through F-11) as identified by the RFI Work Plan. Soil samples were collected at depths of 0 to 6 inches, 18 to 24 inches, and a third sample was collected from 36 to 42 inches and archived.

8.1.2 Underground Spill Containment Tanks

From 1975 to 1978, drainage from the acid and alkaline unloading pads on the south side of the building was piped to two underground tanks. The tanks were installed as a precaution against spills which potentially could occur during transfer of incoming wastes. According to the RFI Work Plan, the tanks were removed and found to be brittle. Soil borings in the locations of the tanks were specified by the RFI Work Plan to evaluate the effects of possible leakage from these tanks.

On November 16, 1994, boring T-4 was drilled to auger refusal at 9.5 fbg. One soil sample from 6 to 8 fbg was collected for analysis. Boring T-3 was drilled to 12 fbg, and samples were collected at 6 to 8 fbg and 10 to 12 fbg. A fiberglass plug was found in the split spoon sample from 10 to 12 fbg. Further drilling was halted due to the possibility that the tanks had not been removed. The T-3 borehole was backfilled with bentonite to a depth of 9 fbg. The remainder of the boring was filled with sand. Borings T-1 and T-2 at the second tank location were deferred until the disposition of the former tanks could be verified.

On February 1, 1995, a backhoe was used to excavate surficial soil in the vicinity of the former tanks. Remnants of a partially crushed fiberglass underground storage tank was found in the vicinity of borings T-3 and T-4. Apparently, the tank may have been too brittle to remove and was crushed in-place and filled with a fine sand. The tank was reported to be 3 feet in diameter. A complete underground storage tank was observed in the vicinity of proposed borings T-1 and T-2. The tank is cylindrical and upright, approximately 6 feet deep and 6 feet in diameter. The tank was observed to be holding a liquid. The base of both tanks were estimated to be approximately 10 fbg. Therefore, on February 8, 1995 borings T-1, T-2, T-5 and T-6 were installed adjacent to the tanks with samples collected between 9 and 15 feet below grade.

8.1.3 Dry Wells

Two former dry wells located to the south of the building were used for the collection and discharge of stormwater. The base of the dry wells was reported to be 5 fbg. Surface drainage may have picked up surface soil contamination and transported it to the dry wells. Since the dry wells are filled with large stones and boulders, and drainage from the wells would likely flow both outward and downward, soil borings were drilled beside the dry wells. Soil borings D-1 and D-2 were drilled to 7 fbg beside the dry wells, and one sample from each borehole (5 to 7 fbg) was collected for analysis.

8.1.4 Wastewater Spill Area

In 1988, a pipe break on the Thomaston POTW property caused a spill of treated industrial wastewater on the Town of Thomaston property south of Envirite. According to the RFI Work Plan, samples were to be collected on a regular grid to ensure that the entire area of the spill was examined.

On November 3 and 4, 1993, EAS laboratory collected soil samples from 20 locations on the Town of Thomaston property. Two locations (19 and 20) were sampled to evaluate background soil conditions on the Town of Thomaston property. Samples were obtained by hand at depths of 0 to 6 inches and 18 to 24 inches. The soil sample locations are depicted on Figure 8-1. All of the soil samples were analyzed for the constituents listed in Table 8-1.

8.1.5 Roadway Areas

During a previous site investigation conducted in December 1988, analyses of surficial soil detected contamination along Old Waterbury Road and the southern driveway entrance. To further define boundaries and evaluate potential groundwater impacts from releases along the roadways, sixteen soil borings (R-1 through R-16) were installed at locations identified in the RFI Work Plan. Borings were placed along the roadways, approximately three feet from the edge of the pavement. Boring R-12 was drilled to 19 fbg to further delineate the area of the Pre-Envirite Waste Material. Soil samples were collected at 0 to 6 and 18 to 24 inches below grade. A third sample was collected at 36 to 42 inches below grade and archived.

8.1.6 General Facility

In order to determine whether soil quality at the site has been affected in areas which are not directly associated with a particular activity, "general facility" borings were installed near the facility building within the area surrounded by the landfill and "perimeter" borings installed in the area around the perimeter of the landfill.

Eight general facility borings (G-1 and G-3 through G-9) were installed in the interior area. The G-series borings were located where surface drainage occurred, near the facility building, and near sludge handling areas.

Ten perimeter borings (P-1 through P-10) were installed surrounding the landfill. Samples from the perimeter of the landfill were collected to assess direct impacts to the soil quality and the potential for impacts to groundwater quality due to runoff. In addition to assessing impacts to soil quality, borings P-1 through P-5 were installed to verify the horizontal limits of the treatment residues in Cells 1, 2 and 3 of the landfill. Borings were initially drilled at the toe of the landfill slope, if treatment residues were encountered, the boring was moved away from the landfill in 10 foot increments. Samples were analyzed from perimeter borings that did not encounter treatment residues.

Soil samples were collected in each boring at 0 to 6 and 18 to 24 inches below grade. A third sample was collected at 36 to 42 inches below grade and archived. According to the RFI Work Plan, soil samples were to be collected at greater depths in borings P-6 and P-7. However, samples could not be collected at depths greater than 36 to 42 inches below grade in P-6 and P-7 due to auger refusal.

8.1.7 Background

Background samples were collected to compare the contaminant levels in nearby soils not impacted by the Envirite facility to the contaminant levels in on-site soils potentially impacted by the facility. Eight background samples (B-1 through B-8) were collected at the following locations: off-site near the northern Envirite property line; on the west side of Branch Brook; and adjacent to the northwest corner of the site. All background soil samples were collected from 3 to 9 inches below grade using hand methods.

8.2 SAMPLING AND ANALYSIS

Soil samples in the additional areas of concern were collected using split spoon techniques or hand methods as described in Appendix C.

All samples were analyzed for the Appendix IX derived landfill parameter list (Table 7-4) which includes VOCs, SVOCs, herbicides, pesticides, PCBs, cyanide, sulfide and metals. Samples were analyzed for both total and extractable constituents. Extractable constituents were determined using the SPLP. Six archived samples were analyzed for VOCs since VOCs were detected in the upper sample at those locations. Soil and concrete samples collected within the storage and treatment facility (locations F-1 through F-5) were also analyzed for hexavalent chromium as specified in the RFI Work Plan.

9.0 CONTAMINANT CHARACTERIZATION: DATA SUMMARY

As described in Sections 6.0 through 8.0, numerous samples of landfill residue, Pre-Envirite Waste Material, and shallow soils were collected to characterize waste sources at the site. The effects of these sources were assessed via chemical analysis of groundwater, surface water, stream sediment, and soil.

Consistent with the requirements of Attachment IV, Section II of the EPA Consent Order, this section of Phase I Interim Report presents a summary of all analytical data collected during the first phase of field investigations. In the final RFI Report to be completed at the end of Phase II, chemical analyses from all media will be evaluated to assess the fate, transport and extent of chemical constituents detected at the site.

This analytical data summary includes tables of all data (Appendix G) and summary statistics of analytical results (mean, median, max [value and location] average, and number of detections) for each media (Tables 9-1 through 9-30).

We note that the compounds decachlorobiphenyl and tetrachloro m-xylene are included on the data compilations, however these compounds were not present in any samples taken from the site, but were laboratory surrogates for quality control purposes.

9.1 SOURCE CHARACTERIZATION RESULTS

9.1.1 Pre-Envirite Waste Material

Analytical results from the Pre-Envirite Waste Material indicate that they contain a variety of organic and inorganic constituents. Average concentrations of detectable metals constituents typically range from 0.1 mg/kg to 1,000 mg/kg. Maximum concentrations were typically in the 1.0 mg/kg to 1,000 mg/kg range. Average concentrations of detectable organic compounds, and volatile organic compounds in particular, were quite high. Average concentrations typically ranged from 1.0 mg/kg to 1,000 mg/kg with maximum concentrations in the 10,000 mg/kg range. The majority of the Pre-Envirite Waste Material is located at or below the water table.

The extent of the Pre-Envirite Waste Material was to be determined based on soil boring results. These results indicate that 55 percent of the known volume of this material is located off the Envirite property to the east. The borings were extended beyond the Envirite property boundary to the east as far as the paved surface of Old Waterbury Road. Samples from the borings indicate that the deposit extends under the road. Since the paved road was in existence when Envirite acquired the site, it is clear that the material was deposited in the ground before Envirite's operation. Since the material extends under Old Waterbury Road, the full extent of the material could not be determined to the east.

9.1.2 Landfilled Treatment Residues

Consistent with available information regarding the origins of the landfilled residues and previous testing, the predominant compounds present in the treatment residues are metals with average mass concentrations between 1.0 mg/kg and 2,000 mg/kg. Maximum concentrations were typically in the 10,000 mg/kg range. In contrast, average concentrations for detected organic constituents typically ranged from 0.1 mg/kg to 1.0 mg/kg. Landfilled treatment residues were observed to be located above the water table consistent with the design of the landfill.

A tabular comparison of the maximum concentrations of a few key parameters is shown below:

Parameter	Pre-Envirite Waste Material (mg/kg)	Envirite Treatment Residues (mg/kg)
Methylene Ethyl Ketone	2,100	0.22
Trichloroethylene	3,300	0.70
Tetrachloroethene	3,100	7.1
Benzene	30	3.9
Toluene	15,000	0.21
Ethyl Benzene	3,100	1.8
Xylene	16,000	0.61

We conducted leaching tests in order to characterize the mobility of chemical constituents to migrate from the treatment residues using the SPLP. Analytical results from mobility testing indicate that the landfill constituents are generally not mobile. The average detectable metals concentration in the extract were in the 0.001 mg/l to 0.1 mg/l range with maximum concentrations in the 0.1 mg/l range. The average detectable organic constituent concentration in extract were in the 0.001 mg/l to 0.01 mg/l range with maximum concentrations in the 0.01 mg/l range. The low mobility of these constituents combined with the closed nature of the landfill cells indicate that the treatment residues are not a significant source of releases.

9.1.3 Other AOC Areas

Analytical testing of soils from the rest of the facility indicated the presence of relatively lower concentrations of a variety of constituents. While the results of metal and organic analyses indicate some level of impact to soils at selected areas at the site, the overall mass of constituents present appears to be low relative to other areas investigated. Concentrations detected in SPLP extract from these soils were also quite low and do not indicate significant impacts from these areas to other media of concern.

Analytical results from background sampling locations were tabulated and reviewed. The results appear to indicate that the locations selected for background comparisons are unaffected by the Envirite site.

9.2 GROUNDWATER ANALYTICAL RESULTS

Groundwater data indicate that, in general, the highest concentrations of organic constituents were found in monitoring well MW-30 and well cluster MW-31. These wells are located immediately downgradient of the Pre-Envirite Waste Material and, based on the data collected, indicate that the Pre-Envirite Waste Material is the predominant source of organic constituents at the site.

The next highest concentration of organic constituents in groundwater was observed in deep overburden and bedrock wells located in the southwest corner of the site. Observed groundwater flow paths and the relative concentrations of constituents observed in these wells indicate that these constituents originate from the Pre-Envirite Waste Material and migrate to the southwest and downward across the site.

Groundwater data also indicate that concentrations of copper, nickel, and zinc are highest in wells MW-43D, MW-44D and MW-44B, located at the downgradient property line. Data for pH levels in these wells is typically one to one and a half units lower than the rest of the site as well. These wells are located immediately downgradient of areas impacted by an on-site acid spill event which occurred in 1983. The spill is the likely source of these constituents in the wells since the observed metal constituents and depressed pH are typical of the composition of the material released, and constituent concentrations are decreasing over time (as reported in Envirite's last several Annual Monitoring Reports), which indicate that impacts are from a historic release rather than an on-going source.

Groundwater analytical data indicate that the highest observed concentrations of barium, cadmium, cobalt, iron, and vinyl acetate were found in off-site wells located at the POTW. Also, as documented in a December 1990 report entitled "Report on Investigations at the Thomaston Sewage Treatment Plant, Thomaston Connecticut" prepared for the town by HRP Associates of Plainville, Connecticut, elevated concentrations of sodium and sulfate have been found in groundwater at the POTW. The POTW has been present at this location since the 1960's and has historically treated industrial wastewaters. Past management practices included storing treatment sludges in unlined, uncovered stockpiles on-site. Analytical results reported in the HRP report indicated that the stockpiles contained cadmium, iron, sodium, sulfate, and other inorganic constituents.

9.3 SURFACE WATER ANALYTICAL RESULTS

In general, organic and inorganic constituents were present in upgradient surface water samples at similar concentrations to those found downgradient of the site in both Branch Brook and the Naugatuck River.

Sediment sampling results indicate that, in general, upgradient concentrations of organic and inorganic constituents were equivalent to downgradient concentrations in Branch Brook. The results of sediment sampling in the Naugatuck River indicate that, in general, upgradient and downgradient concentrations of organic constituents were equivalent. However, concentrations of inorganic constituents increased downgradient of the site. Hydrogeologic data collected during this investigation indicate that the Envirite site is not the source of these increased concentrations since groundwater flow patterns indicate that flow on the site is predominantly to Branch Brook. We note that the Thomaston POTW does discharge to the Naugatuck River within the zone where sediment samples were collected.

9.4 BIOASSESSMENT RESULTS

Consistent with the results of the hydrogeologic investigations and the results of surface water and sediment sampling, the aquatic communities in both rivers appear healthy.

The results of the bioassessment indicate that two sampling locations on the Naugatuck River were assessed to be "slightly impaired" in the Fall sampling round. However, we do not believe these results are due to impacts from the Envirite facility since groundwater flow data indicate the Envirite facility is not impacting the Naugatuck River.

In the Spring sampling round, one station on Branch Brook fell just below the "non-impacted" category. However, this station was bracketed by non-impaired stations and the marginally lower result is believed to be related to the cyclic changes in the habitat caused by the activities of beavers.

10.0 PROPOSED PHASE II INVESTIGATIONS

10.1 RFI PHASE I PURPOSE AND COMPONENTS

Phase I of the RFI investigation at the approximately 7 acre Envirite site included the following components:

- Evaluation of geologic data from published sources, 32 on-site soil boring/well installations, and 10 off-site soil boring/well installations;
- Evaluation of geohydrologic data from published sources, borehole permeability tests in 19 on-site and off-site wells, a one day step-test, and a three day pump test, multiple rounds of static water level measurements from on- and off-site wells, and two rounds of groundwater sampling and analysis from on- and off-site wells.

- Evaluation of surface water data from published sources, two rounds of flow measurements from three stream transects in each river, profiling of stream mixing characteristics at 45 monitoring points in each river, two rounds of chemical analytical data for 8 to 10 samples from each river, installation and sampling of 3 stream bed piezometers in each river;

- Evaluation of stream sediment data including 6 sediment thickness profiles in each river, characterization of sediment type at 261 points, sampling and analysis of physical characteristics at 10 points in each river and sampling and chemical analysis of 8 sediment samples from each river;

- Sampling and analysis (total and leachable constituents) of 38 landfill residue samples for VOCs, SVOCs, metals, herbicides, pesticides, and PCB;

- Sampling and analysis (total and leachable constituents) of 109 soil samples form 43 shallow borings across the site. Samples were analyzed for VOCs, SVOCs, metals, herbicides, pesticides, and PCBs. Selected samples were also analyzed for dioxin/furan compounds; and

- Sampling and analysis (total and leachable constituents) of 5 Pre-Envirite Waste Material samples and 43 samples of surrounding soil. Samples were analyzed for VOCs, SVOCs, Metals, Herbicides, Pesticides, and PCBs. Selected samples were also analyzed for dioxin/furan compounds.

Upon review of the information generated in Phase I, it is our opinion that (with two exceptions discussed below) we have adequate data to meet the principal objectives of the RFI as delineated in the EPA Consent Order which are to:

- Determine the nature, rate, and on-site extent of releases of hazardous waste and/or hazardous constituents from the Area of Concern (AOC) Attachment IV, Section I;

- Characterize the environmental setting of the facility, the sources of releases, and the contamination. Attachment IV, Section I.D., III.A, III.B, and III.C;

- Gather the preliminary information necessary to select and design corrective measures for releases from the AOCs, Attachment IV, Section I;

- Identify the human and wildlife populations and environmental systems that are susceptible to contaminant exposure from the facility and propose methods to address potential impacts on these receptors from actual (or potential) exposure originating from the AOCs; Attachment IV, Sections I.D.4 and III.D; and

- Conduct the analyses necessary to propose media protection standards Attachment IV, Section IV.

10.2 PROPOSED PHASE II INVESTIGATORY TASKS

Since one of the underground spill containment tanks (and part of the second) was still in place, we were not able to completely characterize that AOC during the Phase I investigation. Therefore, as part of the Phase II of the RFI, we propose to excavate and remove the complete and partial tanks and collect samples from the sidewalls and bottom of the excavation to complete the assessment of the AOC.

Four sidewall samples (one from each wall along the center line of the former tank) and two bottom samples will be collected from each excavation. Samples will be analyzed for total and SPLP extractable compounds that are on the AOC Appendix IX modified parameter list. This task will be completed approximately six weeks after receipt of EPA approval of the Phase I Report.

Collection of these data will complete the evaluation of on-site AOCs. The only other AOC which has not been completely characterized is the off-site extent of the Pre-Envirite Waste Material. At the conclusion of Phase I, the eastern most extent of the Pre-Envirite Waste Material has not been determined (Figure 7-1).

A significant portion (approximately 55 percent) of the Pre-Envirite Waste Material identified to date is located off the Envirite site on property apparently owned by the Town of Thomaston (Figure 7-1). Envirite would like to discuss with EPA who would be responsible for assessing the off-site Pre-Envirite Waste Material since Envirite does not own the property, nor were they responsible for the placement of these materials.

11.0 REFERENCES

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TABLES

TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)										
Well Number	MP-1	EX-1	MW30S	MW31S	MW31D	MW31B	MW32S	MW32D	MW33	MW36S
Top of PVC	342.96	340.2	341.74	340.30	341.76	341.75	340.59	340.35	340.48	328.83
Ground	341	338	342	340	-	-	341	338	339	327
Top of Screen	328	317	303	323	313	303	324	308	323	305
Base of Screen	303	284	293	313	308	293	314	398	313	295
Bedrock Surface	-	281	293	-	309	309	298	298	-	-

GROUNDWATER DEPTH (Feet MSL)										
Well Number	MP-1	EX-1	MW30S	MW31S	MW31D	MW31B	MW32S	MW32D	MW33	MW36S
January 4, 1993	-	-	15.75	16.00	-	-	12.50	13.25	16.50	7.31
April 5, 1993	-	-	10.17	15.50	-	-	13.50	13.67	16.83	5.00
July 6, 1993	-	-	18.13	16.40	17.97	17.99	16.07	16.24	18.68	7.12
October 12, 1993	-	-	17.75	17.50	17.58	17.75	15.00	-	17.42	5.67
April 19-28, 1994	-	-	16.75	16.46	16.58	16.08	14.50	14.50	17.08	5.67
October 4-5, 1994	-	-	17.40	16.09	17.57	17.48	15.32	15.30	16.64	4.69
December 20, 1994	19.47	16.75	16.56	15.40	16.85	16.60	14.80	14.74	16.53	4.52

GROUNDWATER ELEVATION (Feet MSL)										
Well Number	MP-1	EX-1	MW30S	MW31S	MW31D	MW31B	MW32S	MW32D	MW33	MW36S
January 4, 1993	-	-	325.99	324.30	-	-	328.09	327.10	323.98	321.52
April 5, 1993	-	-	331.57	324.80	-	-	327.09	326.68	323.65	323.83
July 6, 1993	-	-	323.61	323.90	323.79	323.76	324.52	324.11	321.80	321.71
October 12, 1993	-	-	323.99	322.80	324.18	324.00	325.59	-	323.06	323.16
April 19-28, 1994	-	-	324.99	323.84	325.18	325.67	326.09	325.85	323.40	323.16
October 4-5, 1994	-	-	324.34	324.21	324.19	324.27	325.27	325.05	323.84	324.14
December 20, 1994	323.49	323.4	325.18	324.90	324.91	325.15	325.79	325.61	323.95	324.31

GROUNDWATER ELEVATION SUMMARY										
Well Number	MP-1	EX-1	MW30S	MW31S	MW31D	MW31B	MW32S	MW32D	MW33	MW36S
Minimum:	323.49	323.4	323.61	322.80	323.79	323.76	324.52	324.11	321.80	321.52
Maximum:	323.49	323.4	331.57	324.90	325.18	325.67	328.09	327.10	323.98	324.31
Average (x):	323.49	323.4	325.67	324.11	324.45	324.57	326.06	325.73	323.38	323.12
Median:	323.49	323.4	324.99	324.21	324.19	324.27	325.79	325.73	323.65	323.16
Standard Deviation (s):	-	-	2.72	0.70	0.57	0.81	1.19	1.09	0.77	1.12
Coefficient of Variation s/x:	-	-	0.008	0.002	0.002	0.002	0.004	0.003	0.002	0.003

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

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TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)									
Well Number	MW37D	MW37B	MW41S	MW41D	MW41B	MW42S	MW42B	MW43S	MW43D
Top of PVC	328.39	327.59	335.23	334.40	334.56	341.12	341.15	340.42	340.64
Ground	326	326	333	333	333	339	-	339	339
Top of Screen	299	-	323	311	323	316	275	317	281
Base of Screen	294	-	313	300	313	306	265	307	271
Bedrock Surface	276	276	297	297	297	-	281	271	271

GROUNDWATER DEPTH (Feet MSL)									
Well Number	MW37D	MW37B	MW41S	MW41D	MW41B	MW42S	MW42B	MW43S	MW43D
January 4, 1993	-	-	13.38	10.83	13.00	18.08	-	18.42	18.33
April 5, 1993	-	-	10.50	9.42	11.83	16.75	-	17.83	17.92
July 6, 1993	-	-	13.23	12.17	12.17	19.54	-	18.86	19.07
October 12, 1993	-	-	12.67	12.17	14.83	18.58	21.67	18.86	19.07
April 19-28, 1994	-	-	11.46	10.42	12.67	17.58	18.33	18.42	18.92
October 4-5, 1994	3.82	3.46	12.30	11.31	11.55	17.98	19.37	17.11	17.26
December 20, 1994	3.33	3.69	11.77	10.81	10.88	17.62	22.33	16.82	16.99

GROUNDWATER ELEVATION (Feet MSL)									
Well Number	MW37D	MW37B	MW41S	MW41D	MW41B	MW42S	MW42B	MW43S	MW43D
January 4, 1993	-	-	321.85	323.57	321.56	323.04	-	322.00	322.31
April 5, 1993	-	-	324.73	324.98	322.73	324.37	-	322.59	322.72
July 6, 1993	-	-	322.00	322.23	322.39	321.58	-	321.56	321.57
October 12, 1993	-	-	322.56	322.23	319.73	322.54	319.48	321.56	321.57
April 19-28, 1994	-	-	323.77	323.98	321.89	323.54	322.82	322.00	321.72
October 4-5, 1994	324.57	324.13	322.93	323.09	323.01	323.14	321.78	323.31	323.38
December 20, 1994	325.06	323.90	323.46	323.59	323.68	323.50	318.82	323.60	323.65

GROUNDWATER ELEVATION SUMMARY									
Well Number	MW37D	MW37B	MW41S	MW41D	MW41B	MW42S	MW42B	MW43S	MW43D
Minimum:	324.57	323.90	321.85	322.23	319.73	321.58	318.82	321.56	321.57
Maximum:	325.06	324.13	324.73	324.98	323.68	324.37	322.82	323.60	323.65
Average (x):	324.82	324.02	323.04	323.38	322.14	323.10	320.73	322.37	322.42
Median:	324.82	324.02	322.93	323.57	322.39	323.14	320.63	322.00	322.31
Standard Deviation (s):	0.35	0.16	1.03	0.98	1.27	0.88	1.89	0.82	0.86
Coefficient of Variation s/x:	0.001	0.001	0.003	0.003	0.004	0.003	0.006	0.003	0.003

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden. "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

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TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)									
Well Number	MW44S	MW44D	MW44B	MW50S	MW51D	MW51B	MW52D	MW53D	MW55B
Top of PVC	338.64	339.26	340.31	337.66	340.37	340.24	342.45	339.75	341.25
Ground	338	338	338	337	341	-	342	338	340
Top of Screen	321	276	263	328	322	302	294	308	326
Base of Screen	311	266	253	318	312	292	284	298	315
Bedrock Surface	266	266	264	316	307	307	281	297	332

GROUNDWATER DEPTH (Feet MSL)									
Well Number	MW44S	MW44D	MW44B	MW50S	MW51D	MW51B	MW52D	MW53D	MW55B
January 4, 1993	17.33	17.17	19.17	12.00	14.67	-	16.67	13.50	12.08
April 5, 1993	16.58	16.33	18.25	11.92	14.00	-	15.83	13.83	12.17
July 6, 1993	17.10	17.67	18.76	14.07	17.16	17.04	19.80	15.97	16.91
October 12, 1993	12.66	17.33	20.58	13.50	16.58	17.04	19.80	15.33	15.50
April 19-28, 1994	15.75	16.42	19.00	13.25	15.75	15.33	17.54	15.04	13.58
October 4-5, 1994	14.96	15.68	16.78	13.72	16.14	15.94	18.04	15.61	15.75
December 20, 1994	14.81	15.46	16.54	13.09	15.35	15.03	17.23	14.96	14.02

GROUNDWATER ELEVATION (Feet MSL)									
Well Number	MW44S	MW44D	MW44B	MW50S	MW51D	MW51B	MW52D	MW53D	MW55B
January 4, 1993	321.31	322.09	321.14	325.66	325.70	-	325.78	326.25	329.17
April 5, 1993	322.06	322.93	322.06	325.74	326.37	-	326.62	325.92	329.08
July 6, 1993	321.54	321.59	321.55	323.59	323.21	323.20	322.65	323.78	324.34
October 12, 1993	325.98	321.93	319.73	324.16	323.79	323.20	322.65	324.42	325.75
April 19-28, 1994	322.89	322.84	321.31	324.41	324.62	324.91	324.91	324.71	327.67
October 4-5, 1994	323.68	323.58	323.53	323.94	324.23	324.30	324.41	324.14	325.50
December 20, 1994	323.83	323.80	323.77	324.57	325.02	325.21	325.22	324.79	327.23

GROUNDWATER ELEVATION SUMMARY									
Well Number	MW44S	MW44D	MW44B	MW50S	MW51D	MW51B	MW52D	MW53D	MW55B
Minimum:	321.31	321.59	319.73	323.59	323.21	323.20	322.65	323.78	324.34
Maximum:	325.98	323.80	323.77	325.74	326.37	325.21	326.62	326.25	329.17
Average (x):	323.04	322.68	321.87	324.58	324.71	324.16	324.61	324.86	326.96
Median:	322.89	322.84	321.55	324.41	324.62	324.30	324.91	324.71	327.23
Standard Deviation (s):	1.63	0.84	1.41	0.83	1.09	0.94	1.51	0.91	1.84
Coefficient of Variation s/x:	0.005	0.003	0.004	0.003	0.003	0.003	0.005	0.003	0.006

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

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TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)										
Well Number	MW56S	MW56D	MW57S	MW58S	MW58D	MW59S	MW59D	MW60S	MW61S	MW61D
Top of PVC	332.96	332.78	331.30	329.30	329.21	331.12	331.36	329.61	339.31	339.34
Ground	333	333	331	329	329	331	331	330	-	-
Top of Screen	326	284	324	323	261	326	291	326	315	296
Base of Screen	321	279	319	318	256	316	281	316	309	286
Bedrock Surface	-	279.6	-	-	255	-	280	-	284	284

GROUNDWATER DEPTH (Feet MSL)										
Well Number	MW56S	MW56D	MW57S	MW58S	MW58D	MW59S	MW59D	MW60S	MW61S	MW61D
January 4, 1993	-	-	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-	-	-
July 6, 1993	-	-	-	-	-	-	-	-	16.81	20.04
October 12, 1993	-	-	-	-	-	-	-	-	16.81	17.58
April 19-28, 1994	10.33	10.50	8.92	7.50	7.25	8.75	8.92	7.58	15.00	15.33
October 4-5, 1994	10.04	10.19	8.56	7.65	7.41	9.05	9.27	7.93	16.10	15.02
December 20, 1994	-	-	-	-	-	-	-	-	14.79	14.85

GROUNDWATER ELEVATION (Feet MSL)										
Well Number	MW56S	MW56D	MW57S	MW58S	MW58D	MW59S	MW59D	MW60S	MW61S	MW61D
January 4, 1993	-	-	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-	-	-
July 6, 1993	-	-	-	-	-	-	-	-	322.50	319.30
October 12, 1993	-	-	-	-	-	-	-	-	322.50	321.76
April 19-28, 1994	322.63	322.28	322.38	321.80	321.96	322.37	322.44	322.03	324.31	324.01
October 4-5, 1994	322.92	322.59	322.74	321.65	321.80	322.07	322.09	321.68	323.21	324.32
December 20, 1994	-	-	-	-	-	-	-	-	324.52	324.49

GROUNDWATER ELEVATION SUMMARY										
Well Number	MW56S	MW56D	MW57S	MW58S	MW58D	MW59S	MW59D	MW60S	MW61S	MW61D
Minimum:	322.63	322.28	322.38	321.65	321.80	322.07	322.09	321.68	322.50	319.30
Maximum:	322.92	322.59	322.74	321.80	321.96	322.37	322.44	322.03	324.52	324.49
Average (x):	322.78	322.44	322.56	321.73	321.88	322.22	322.27	321.86	323.41	322.78
Median:	322.78	322.44	322.56	321.73	321.88	322.22	322.27	321.86	323.21	324.01
Standard Deviation (s):	0.21	0.22	0.25	0.11	0.11	0.21	0.25	0.25	0.97	2.23
Coefficient of Variation s/x:	0.001	0.001	0.001	0.000	0.000	0.001	0.001	0.001	0.003	0.007

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)									
Well Number	MW61B	MW62S (3)	MW62B	MW63S	BBP-1 in	BBP-1 out	BBP-2 in	BBP-2 out	BBP-3 in
Top of PVC	339.53	338.49	338.57	342.68	324.74	324.74	329.17	329.17	325.42
Ground	-	-	-	-	-	-	-	-	-
Top of Screen	278	318	311	-	-	-	-	-	-
Base of Screen	268	316	301	-	-	-	-	-	-
Bedrock Surface	284	316	316	-	-	-	-	-	-

GROUNDWATER DEPTH (Feet MSL)									
Well Number	MW61B	MW62S (3)	MW62B	MW63S	BBP-1 in	BBP-1 out	BBP-2 in	BBP-2 out	BBP-3 in
January 4, 1993	-	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-	-
July 6, 1993	16.83	15.29	33.12	17.84	-	-	-	-	-
October 12, 1993	16.00	14.92	29.33	17.25	-	-	-	-	-
April 19-28, 1994	15.17	14.50	16.04	16.08	-	-	-	-	-
October 4-5, 1994	16.15	14.89	14.90	17.09	-	-	3.13	-	-
December 20, 1994	18.61	14.35	32.85	16.48	0.78	0.75	2.99	2.97	1.41

GROUNDWATER ELEVATION (Feet MSL)									
Well Number	MW61B	MW62S (3)	MW62B	MW63S	BBP-1 in	BBP-1 out	BBP-2 in	BBP-2 out	BBP-3 in
January 4, 1993	-	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-	-
July 6, 1993	322.70	323.20	305.45	324.84	-	-	-	-	-
October 12, 1993	323.53	323.57	309.24	325.43	-	-	-	-	-
April 19-28, 1994	324.36	323.99	322.53	326.60	-	-	-	-	-
October 4-5, 1994	323.38	323.60	323.67	325.59	-	-	326.04	-	-
December 20, 1994	320.92	324.14	305.72	326.20	323.96	323.99	326.18	326.20	324.01

GROUNDWATER ELEVATION SUMMARY									
Well Number	MW61B	MW62S (3)	MW62B	MW63S	BBP-1 in	BBP-1 out	BBP-2 in	BBP-2 out	BBP-3 in
Minimum:	320.92	323.20	305.45	324.84	323.96	323.99	326.04	326.20	324.01
Maximum:	324.36	324.14	323.67	326.60	323.96	323.99	326.18	326.20	324.01
Average (x):	322.98	323.70	313.32	325.73	323.96	323.99	326.11	326.20	324.01
Median:	323.38	323.60	309.24	325.59	323.96	323.99	326.11	326.20	324.01
Standard Deviation (s):	1.29	0.37	9.06	0.69	-	-	0.10	-	-
Coefficient of Variation s/x:	0.004	0.001	0.029	0.002	-	-	0.000	-	-

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

Date Prepared: 1/24/95
Updated: 2/16/95
Printed: 3/17/95

TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)								
Well Number	BBP-3 out	BBP-4 in	BBP-4 out	NRP-1 in	NRP-1 out	NRP-2 in	NRP-2 out	NRP-3 in
Top of PVC	325.42	324.39	324.39	327.06	327.06	327.86	327.86	327.79
Ground	-	-	-	-	-	-	-	-
Top of Screen	-	-	-	-	-	-	-	-
Base of Screen	-	-	-	-	-	-	-	-
Bedrock Surface	-	-	-	-	-	-	-	-

GROUNDWATER DEPTH (Feet MSL)								
Well Number	BBP-3 out	BBP-4 in	BBP-4 out	NRP-1 in	NRP-1 out	NRP-2 in	NRP-2 out	NRP-3 in
January 4, 1993	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-
July 6, 1993	-	-	-	-	-	-	-	-
October 12, 1993	-	-	-	-	-	-	-	-
April 19-28, 1994	-	-	-	-	-	-	-	-
October 4-5, 1994	-	2.38	-	2.88	-	3.08	-	3.78
December 20, 1994	1.46	2.25	2.38	2.25	2.18	2.37	2.40	3.28

GROUNDWATER ELEVATION (Feet MSL)								
Well Number	BBP-3 out	BBP-4 in	BBP-4 out	NRP-1 in	NRP-1 out	NRP-2 in	NRP-2 out	NRP-3 in
January 4, 1993	-	-	-	-	-	-	-	-
April 5, 1993	-	-	-	-	-	-	-	-
July 6, 1993	-	-	-	-	-	-	-	-
October 12, 1993	-	-	-	-	-	-	-	-
April 19-28, 1994	-	-	-	-	-	-	-	-
October 4-5, 1994	-	322.01	-	324.18	-	324.78	-	324.01
December 20, 1994	323.96	322.14	322.01	324.81	324.88	325.49	325.46	324.51

GROUNDWATER ELEVATION SUMMARY								
Well Number	BBP-3 out	BBP-4 in	BBP-4 out	NRP-1 in	NRP-1 out	NRP-2 in	NRP-2 out	NRP-3 in
Minimum:	323.96	322.01	322.01	324.18	324.88	324.78	325.46	324.01
Maximum:	323.96	322.14	322.01	324.81	324.88	325.49	325.46	324.51
Average (x):	323.96	322.08	322.01	324.50	324.88	325.14	325.46	324.26
Median:	323.96	322.08	322.01	324.50	324.88	325.14	325.46	324.26
Standard Deviation (s):	-	0.09	-	0.45	-	0.50	-	0.35
Coefficient of Variation s/x:	-	0.000	-	0.001	-	0.002	-	0.001

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

TABLE 3-1
SUMMARY OF WELL AND GROUNDWATER ELEVATIONS
Envirite Facility
Thomaston, Connecticut

WELL ELEVATIONS (Ft. MSL)			
Well Number	NRP-3 out	NRP-4 in	NRP-4 out
Top of PVC	327.79	325.13	325.13
Ground	-	-	-
Top of Screen	-	-	-
Base of Screen	-	-	-
Bedrock Surface	-	-	-

GROUNDWATER DEPTH (Feet MSL)			
Well Number	NRP-3 out	NRP-4 in	NRP-4 out
January 4, 1993	-	-	-
April 5, 1993	-	-	-
July 6, 1993	-	-	-
October 12, 1993	-	-	-
April 19-28, 1994	-	-	-
October 4-5, 1994	-	3.11	-
December 20, 1994	3.22		

GROUNDWATER ELEVATION (Feet MSL)			
Well Number	NRP-3 out	NRP-4 in	NRP-4 out
January 4, 1993	-	-	-
April 5, 1993	-	-	-
July 6, 1993	-	-	-
October 12, 1993	-	-	-
April 19-28, 1994	-	-	-
October 4-5, 1994	-	322.02	-
December 20, 1994	324.57	325.13	325.13

GROUNDWATER ELEVATION SUMMARY			
Well Number	NRP-3 out	NRP-4 in	NRP-4 out
Minimum:	324.57	322.02	325.13
Maximum:	324.57	325.13	325.13
Average (x):	324.57	323.58	325.13
Median:	324.57	323.58	325.13
Standard Deviation (s):	-	2.20	-
Coefficient of Variation s/x:	-	0.007	-

Notes:

1. Groundwater elevations measured by EAS Laboratory personnel in January, April, and October 1993 and April and October 1994. Other groundwater elevations measured by GZA.
2. A "-" indicates information not available, "S" indicates Shallow Overburden, "D" indicates Deep Overburden, and "B" indicates Bedrock.
3. Historic data for well MW-62B indicate that the well does not recharge, indicating that water levels do not reflect piezometer head in the bedrock.

TABLE 3-2
SUMMARY BOREHOLE PERMEABILITY TESTS
ENVIRITE FACILITY
Thomaston, Connecticut

Shallow Overburden (S)				Deep Overburden (D)				Shallow Bedrock (B)			
WELL	TEST TYPE	HYDRAULIC CONDUCTIVITY (ft/sec.)	LOGARITHMS	WELL	TEST TYPE	HYDRAULIC CONDUCTIVITY (ft/sec.)	LOGARITHMS	WELL	TEST TYPE	HYDRAULIC CONDUCTIVITY (ft/sec.)	LOGARITHMS
MW-32S	c	3.5E-3	-2.45	MW-30	c	2.1E-3	-2.68	MW-37B	v	1.4E-3	-2.85
MW-36	c	1.6E-3	-2.80	MW-31D	c	2.1E-4	-3.67	MW-41B	v	2.3E-5	-4.64
MW-41S	c	1.3E-3	-2.89	MW-32D	c	6.8E-4	-3.17	MW-42B	v	2.3E-6	-5.64
MW-42S	c	4.4E-3	-2.36	MW-37D	c	7.2E-4	-3.15	MW-44B	v	1.6E-4	-3.80
MW-44S	c	2.0E-3	-2.70	MW-41D	c	1.5E-3	-2.82	MW-51B	v	3.3E-6	-5.48
MW-50S	c	4.4E-4	-3.36	MW-44D	c	8.3E-3	-2.08	MW-55B	v	1.9E-5	-4.72
MW-59S	c	5.2E-4	-3.28	MW-51D	c	9.4E-4	-3.03	MW-61B	v	1.8E-7	-6.74
MW-60	c	2.2E-4	-3.65	MW-53D	c	5.8E-3	-2.24				
MW-57	v	2.2E-3	-2.66	MW-58D	c	3.1E-3	-2.51				
				MW-59D	c	1.8E-3	-2.74				
				MW-56D	v	2.6E-3	-2.59				
Samples:		9	9			11	11			7	7
Mean:		1.8E-3	-2.91			2.5E-3	-2.79			2.3E-4	-4.84
Median:		1.6E-3	-2.80			1.8E-3	-2.74			1.9E-5	-4.72
Std Dev:		1.4E-3	0.44			2.5E-3	0.45			5.2E-4	1.28
Variance:		2.0E-6	0.19			6.0E-6	0.20			2.7E-7	1.63
Skew:		0.77	-0.55			1.62	-0.35			2.58	0.14
Coeff Var:		0.79	-0.15			0.97	-0.16			2.26	-0.26

STATISTICAL COMPARISON OF SAMPLE DATA FOR UNDERLYING POPULATIONS OF IDENTICAL MEANS	SHALLOW OVERBURDEN: DEEP OVERBURDEN		ALL OVERBURDEN:BEDROCK	
	Original data	Log transforms	Original data	Log transforms
Ostle test statistic (1963)	*0 83*	*0.59*	*3.96*	*4 06*
T-based test criterion	2 25	2 27	2 15	2 44
Same mean of underlying pops ; 95% confidence level:	LIKELY	LIKELY	NO	NO
Variance test statistic (var 1/var 2)	0 33	0 93	15 35	0.12
F-based test criterion	3.35	3 35	2.60	2.60
Same variance of two normal pops ; 95% confidence level:	LIKELY	LIKELY	NO	POSSIBLY

NOTES:

"**c**": constant drawdown test

"**v**": variable head test

1. Hydraulic conductivity data are expressed in feet per second.
2. Borehole permeability tests were conducted by GZA personnel on June 14 through June 22, 1994.
3. Constant drawdown test data were evaluated using the method of Hvorslev (1951) See additional borehole permeability test tables included in Appendix E for other information
4. Variable drawdown test data were evaluated using AQTESOLV version 1 1 See additional borehole permeability test tables included in Appendix E for other information
5. The comparative test of two means of Ostle (1963) and the test for equivalence of variance have been implemented as described in Haan (1991)

TABLE 3-3
TRANSMISSIVITY AND STORAGE ESTIMATES
ENVIRITE FACILITY
Thomaston, Connecticut

HYDROLOGIC PARAMETER		STEADY-STATE	TRANSIENT ANALYSES													
		ALL	EX-1			MP-1			MW-42S			MW-43S			MW-43D		
		Thiem	Jacob	Theis	Recovery	Jacob	Theis	Recovery	Jacob	Theis	Recovery	Jacob	Theis	Recovery	Jacob	Theis	Recovery
TRANS-MISSIVITY (ft2/min)	Est. 1:	2.2	8.3	6.2	1.1	3.6	3.9	1.0	45.1	48.7	24.8	24.0	25.8	43.0	81.4	98.3	3.8
	Est. 2:	0.6			0.2	7.0					27.2	32.0	33.4	26.8	16.8	92.2	7.3
	Est. 3:	0.8				2.0											6.7
	Mean:	**1.2**	8.3	6.2	0.7	4.2	3.9	1.0	45.1	48.7	26.0	28.0	29.6	34.9	49.1	95.2	5.9
	Median:	**0.8**	8.3	6.2	0.7	3.6	3.9	1.0	45.1	48.7	26.0	28.0	29.6	34.9	49.1	95.2	6.7
STORAGE COEFFICIENT (dimensionless)	Est. 1:	0.23	4.0E-48	5.1E-35	-	8.2E-06	4.8E-06	-	2.1E-02	1.6E-02	-	9.7E-04	1.0E-03	-	1.1E-10	2.0E-12	-
	Est. 2:	5.69			-	1.4E-09					-	8.3E-04	7.3E-04	-	1.0E-04	6.6E-12	-
	Est. 3:	0.11				1.0E-03											
	Mean:	**2.01**	4.0E-48	5.1E-35	-	3.4E-04	4.8E-06	-	2.1E-02	1.6E-02	-	9.0E-04	8.6E-04	-	5.1E-05	4.3E-12	-
	Median:	**0.23**	4.0E-48	5.1E-35	-	8.2E-06	4.8E-06	-	2.1E-02	1.6E-02	-	9.0E-04	8.6E-04	-	5.1E-05	4.3E-12	-

TRANSIENT SUMMARY				
Method:	Jacob	Theis	Recovery	ALL
Transmissivity (ft2/min)				
Mean:	24.5	44.1	14.2	**25.8**
Median:	16.8	33.4	7.0	**20.4**
StDev:	25.7	38.2	15.0	**28.1**
Specific Yield (dimensionless)				
Mean:	2.7E-3	2.5E-3	-	**2.6E-3**
Median:	1.0E-4	4.8E-6	-	**5.5E-5**
StDev:	6.9E-3	6.0E-3	-	**6.3E-3**

NOTES:

1. All data are reported in units of feet and minutes unless otherwize noted
2. Steady State Data analyses were performed using Microsoft EXCEL for Windows, version 5.0.
3. Transient Data analyses were performed using the AQTESOLV, version 1.1 computer program developed by the Gheraghty and Miller Modeling Group of Reston, Virginia.
4. *See data sheets and graphs included in Appendix E of this report for additional information.*

TABLE 3-4
SECOND QUARTER (APRIL) 1994 GROUNDWATER FIELD DATA
ENVIRITE CORPORATION
Thomaston, Connecticut

SHALLOW OVERBURDEN MONITORING LOCATIONS					DEEP OVERBURDEN MONITORING LOCATIONS					SHALLOW BEDROCK MONITORING LOCATIONS					CHANGE IN HEAD (1)	
Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	del Head D-S	del Head B-D
	feet	feet	feet	feet		feet	feet	feet	feet		feet	feet	feet	feet	feet	feet
MW30	341.74	48.08	16.75	324.99												
MW31	340.30	29 00	16.46	323.84	MW31D	341.76	33.50	16.58	325.18	MW31B	341.75	45.92	16.08	325.67	1.34	0.49
MW32S	340.59	27.58	14.50	326.09	MW32D	340.35	41.42	14.50	325.85						-0.24	
MW33	340.48	21.33	17.08	323.40												
MW36	328.83	31 50	5.67	323.16												
					MW37D	328.39	33.92			MW37B	327.59	69.25				
MW41S	335.23	23 04	11.46	323.77	MW41D	334.40	35.38	10.42	323.98	MW41B	334.56	56 42	12.67	321.89	0.21	-2.09
MW42S	341.12	35.38	17.58	323.54						MW42B	341.15	78.50	18 33	322.82		
MW43S	340.42	35.08	18.42	322.00	MW43D	340.64	71.33	18.92	321.72						-0.28	
MW44S	338.64	30.08	15.75	322.89	MW44D	339.26	74.83	16.42	322.84	MW44B	340.31	82.08	19.00	321.31	-0.05	-1.53
MW50S	337.66	20 07	13.25	324.41												
					MW51D	340.37	28.17	15.75	324.62	MW51B	340.24	48 10	15 33	324 91		0.29
					MW52D	342.45	58 80	17.54	324.91							
					MW53D	339.75	41.08	15.04	324.71							
										MW55B	341.25	26.17	13.58	327 67		
MW56S	332.96	12 00	10.33	322.63	MW56D	332.78	54.00	10 50	322.28						-0.35	
MW57	331 30	12 00	8 92	322 38												
MW58S	329.30	11 00	7.50	321.80	MW58D	329 21	74 00	7 25	321.96						0.16	
MW59S	331 12	15.00	8.75	322.37	MW59D	331.36	51.00	8.92	322.44						0.07	
MW60	329.61	14 00	7.58	322 03												
MW61S	339.31	22 08	15.00	324.31	MW61D	339.34	51.33	15.33	324.01	MW61B	339.53	70.67	15 17	324.36	-0.30	0.35
MW62S	338.49	23 00	14.50	323.99						MW62B	338.57	37.58	16 04	322.53		
MW63	342.68	26 50	16.08	326.60												

	SURFACE MONITORING LOCATIONS															
	BBP-1 IN	BBP-1 OUT	BBP-2 IN	BBP-2 OUT	BBP-3 IN	BBP-3 OUT	BBP-4 IN	BBP-4 OUT	NRP-1 IN	NRP-1 OUT	NRP-2 IN	NRP-2 OUT	NRP-3 IN	NRP-3 OUT	NRP-4 IN	NRP-4 OUT
TOC	324 74	324 74	329 17	329.17	325.42	325.42	325.42	325.42	327.06	327.06	327.86	327.86	327.79	327.79	325.13	325 13
Depth Water																
GW Elev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes.

1. A positive change in head indicates an upward gradient, a negative change indicates a downward gradient.

TABLE 3-5
FOURTH QUARTER (OCTOBER) 1994 GROUNDWATER FIELD DATA
ENVIRITE CORPORATION
Thomaston, Connecticut

SHALLOW OVERBURDEN MONITORING LOCATIONS					DEEP OVERBURDEN MONITORING LOCATIONS					SHALLOW BEDROCK MONITORING LOCATIONS					CHANGE IN HEAD	
Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	del Head D-S	del Head B-D
	feet	feet	feet	feet		feet	feet	feet	feet		feet	feet	feet	feet	feet	feet
MW30	341.74	48.08	17.40	324.34												
MW31	340.30	29.00	16.09	324.21	MW31D	341.76	33.50	17.57	324.19	MW31B	341.75	45.92	17.48	324.27	-0.02	0.08
MW32S	340.59	27.58	15.32	325.27	MW32D	340.35	41.42	15.30	325.05						-0.22	
MW33	340.48	21.33	16.64	323.84												
MW36	328.83	31.50	4.69	324.14												
					MW37D	328.39	33.92	3.46	324.59	MW37B	327.59	69.25	3.82	324.13		-0.46
MW41S	335.23	23.04	12.30	322.93	MW41D	334.40	35.38	11.31	323.09	MW41B	334.56	56.42	11.55	323.01	0.16	-0.08
MW42S	341.12	35.38	17.98	323.14						MW42B	341.15	78.50	19.37	321.78		
MW43S	340.42	35.08	17.11	323.31	MW43D	340.64	71.33	17.26	323.38						0.07	
MW44S	338.64	30.08	14.96	323.68	MW44D	339.26	74.83	15.68	323.58	MW44B	340.31	82.08	16.78	323.53	-0.10	-0.05
MW50S	337.66	20.07	13.72	323.94												
					MW51D	340.37	28.17	16.14	324.23	MW51B	340.24	48.10	15.94	324.30		0.07
					MW52D	342.45	58.80	18.04	324.41							
					MW53D	339.75	41.08	15.61	324.14							
										MW55B	341.25	26.17	15.75	325.50		
MW56S	332.96	12.00	10.04	322.92	MW56D	332.78	54.00	10.19	322.59						-0.33	
MW57	331.30	12.00	8.56	322.74												
MW58S	329.30	11.00	7.65	321.65	MW58D	329.21	74.00	7.41	321.80						0.15	
MW59S	331.12	15.00	9.05	322.07	MW59D	331.36	51.00	9.27	322.09						0.02	
MW60	329.61	14.00	7.93	321.68												
MW61S	339.31	22.08	15.10	323.21	MW61D	339.34	51.33	15.02	324.32	MW61B	339.53	70.67	16.15	323.38	1.11	-0.94
MW62S	338.49	23.00	14.89	323.60						MW62B	338.57	37.58	14.90	323.67		
MW63	342.68	26.50	17.09	325.59												

	SURFACE MONITORING LOCATIONS															
	BBP-1 IN	BBP-1 OUT	BBP-2 IN	BBP-2 OUT	BBP-3 IN	BBP-3 OUT	BBP-4 IN	BBP-4 OUT	NRP-1 IN	NRP-1 OUT	NRP-2 IN	NRP-2 OUT	NRP-3 IN	NRP-3 OUT	NRP-4 IN	NRP-4 OUT
TOC	324.74	324.74	329.17	329.17	325.42	325.42	325.42	325.42	327.06	327.06	327.86	327.86	327.79	327.79	325.13	325.13
Depth Water			3.13				2.38		2.88		3.08		3.78		3.11	
GW Elev.	-	-	326.04	-	-	-	323.04	-	324.18	-	324.78	-	324.01	-	322.02	-

TABLE 3-6
DECEMBER 1994 GROUNDWATER FIELD DATA
ENVIRITE CORPORATION
Thomaston, Connecticut

SHALLOW OVERBURDEN MONITORING LOCATIONS					DEEP OVERBURDEN MONITORING LOCATIONS					SHALLOW BEDROCK MONITORING LOCATIONS					CHANGE IN HEAD	
Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	Well Number	Top of PVC	Well Depth	Depth to Water	Ground-water Elevation	del Head B-S	del Head B-D
	feet	feet	feet	feet		feet	feet	feet	feet		feet	feet	feet	feet	feet	feet
MW30	341 74	48.08	16.56	325.18												
MW31	340.30	29.00	15.40	324.90	MW31D	341.76	33.50	16.85	324.91	MW31B	341.75	45.92	16.60	325.15	0.01	0.24
MW32S	340.59	27 58	14.80	325.79	MW32D	340.35	41.42	14.74	325.61						-0.18	
MW33	340 48	21.33	16.53	323.95												
MW36	328.83	31 50	4.52	324.31												
					MW37D	328.39	33.92	3.33	325.06	MW37B	327.59	69.25	3.69	323.90		-1.16
MW41S	335 23	23.04	11.77	323.46	MW41D	334.40	35.38	10.81	323.59	MW41B	334.56	56.42	10.88	323.68	0 13	0.09
MW42S	341 12	35 38	17.62	323 50						MW42B	341.15	78.50	22.33	318.82		
MW43S	340 42	35.08	16.82	323.60	MW43D	340.64	71.33	16.99	323.65						0.05	
MW44S	338.64	30 08	14.81	323.83	MW44D	339.26	74.83	15.46	323.80	MW44B	340.31	82.08	16.54	323.77	-0.03	-0.03
MW50S	337 66	20.07	13.09	324 57												
					MW51D	340.37	28.17	15.35	325.02	MW51B	340.24	48.10	15.03	325.21		0.19
					MW52D	342.45	58.80	17.23	325.22							
					MW53D	339.75	41.08	14.96	324.79							
										MW55B	341.25	26.17	14.02	327.23		
MW56S	332 96	12.00	-	-	MW56D	332 78	54.00	-	-						#VALUE!	
MW57	331 30	12.00	-	-												
MW58S	329 30	11 00	-	-	MW58D	329 21	74 00	-	-						#VALUE!	
MW59S	331.12	15.00	-	-	MW59D	331.36	51.00	-	-						#VALUE!	
MW60	329.61	14 00	-	-												
MW61S	339 31	22 08	14 79	324 52	MW61D	339.34	51 33	14 85	324.49	MW61B	339 53	70.67	18.61	320.92	-0.03	-3.57
MW62S	338.49	23 00	14.35	324.14						MW62B	338.57	37.58	32.85	305.72		
MW63	342.68	26 50	16.48	326.20												

	SURFACE MONITORING LOCATIONS															
	BBP-1 IN	BBP-1 OUT	BBP-2 IN	BBP-2 OUT	BBP-3 IN	BBP-3 OUT	BBP-4 IN	BBP-4 OUT	NRP-1 IN	NRP-1 OUT	NRP-2 IN	NRP-2 OUT	NRP-3 IN	NRP-3 OUT	NRP-4 IN	NRP-4 OUT
TOC	324.74	324.74	329.17	329.17	325.42	325.42	325.42	325.42	327.06	327.06	327.86	327.86	327.79	327.79	325.13	325.13
Depth Water	0.78	0.75	2.99	2.97	1.41	1.46	2.25	2.38	2.25	2 18	2.37	2.40	3.28	3.22	-	-
GW Elev.	323.96	323.99	326.18	326.20	324.01	323.96	323.17	323.04	324.81	324.88	325.49	325.46	324.51	324.57	-	-

TABLE 4-1
PRIMARY TRANSECTS:
STAFF GAUGE ELEVATIONS, CALCULATED FLOW RATES (DISCHARGE), CHANGE IN DISCHARGE (VOLUME AND PERCENT) AND RECHARGE ESTIMATES

Naugatuck River

Transect	Date	Staff Gauge Elevation (feet)	Distance (3) (feet)	Streamflow (4) (cubic feet/second)	Change in Flow (cubic feet/second)	Percentage Change in Flow (%)	Recharge Estimate (5) per Lineal Foot of Stream (cf/s)
NRT-2	May 3, 1994	325.33	-	188.7	-	-	-
NRT-3	May 3, 1994	324.40	860	177.6	-11.1	-5.8%	-0.013
NRT-4	May 3, 1994	322.42	700	179.2	1.6	0.9%	0.002
NRT-2 - NRT-4	May 3, 1994	-	1560	-	-9.5	-4.9%	-0.006
NRT-2	October 4, 1994	325.00	-	92.4	-	-	-
NRT-3	October 4, 1994	324.11	860	80.6	-11.8	-12.8%	-0.014
NRT-4	October 4, 1994	322.08	700	73.6	-7.0	-8.7%	-0.010
NRT-2 - NRT-4	October 4, 1994	-	1560	-	-18.8	-21.5%	-0.012

Branch Brook

Transect	Date	Staff Gauge Elevation (feet)	Distance (3) (feet)	Streamflow (4) (cubic feet/second)	Change in Flow (cubic feet/second)	Percentage Change in Flow (%)	Recharge Estimate (5) per Lineal Foot of Stream (cf/s)
BBT-2	April 28, 1994	326.34	-	65.7	-	-	-
BBT-3	April 28, 1994	322.65	520	55.3	-10.4	-15.8%	-0.020
BBT-4	April 28, 1994	322.09	580	53.4	-1.9	-3.4%	-0.003
BBT-2 - BBT-4	April 28, 1994	-	1100	-	-12.3	-19.2%	-0.011
BBT-2	October 5, 1994	326.13	-	30.1	-	-	-
BBT-3	October 5, 1994	323.72	520	24.5	-5.6	-18.6%	-0.011
BBT-4	October 5, 1994	321.91	580	25.9	1.4	5.7%	0.002
BBT-2 - BBT-4	October 5, 1994	-	1100	-	-3.2	-12.9%	-0.003

Notes:

1. Velocity measurements and flow rate calculations are presented in Appendix C.
2. A "-" indicates no calculation due to insufficient upstream discharge data.
3. Distance indicates the distance in feet from the upgradient transect to the measured transect.
4. Streamflow indicates the discharge rate at each transect. Streamflow calculations are presented in Appendix E on the Tables labelled Discharge Data.
5. Recharge estimates per lineal foot of stream in cubic feet per second equal the change in discharge divided by the distance from the upgradient transect to the measured transect.

TABLE 4-2A
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Naugatuck River Transect Number 2
May 2, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
East Bank-5.5	0.00	-	-	-	-	-
NRT2-9.2	0.78	0.5	8.21	169	14.42	12.74
NRT2-16.6	1.07	0.6	8.45	168	14.43	12.75
NRT2-24.0	1.09	0.6	8.58	167	14.42	12.76
NRT2-31.4	1.12	0.7	8.60	167	14.43	12.74
NRT2-38.8	1.28	0.7	8.64	167	14.43	12.66
NRT2-46.2	1.19	0.7	8.67	167	14.45	12.70
NRT2-53.6	1.23	0.7	8.69	167	14.45	12.68
NRT2-61.0	1.21	0.7	8.71	167	14.45	12.64
NRT2-68.4	1.33	0.8	8.72	167	14.45	12.63
NRT2-75.8	1.16	0.7	8.73	166	14.43	12.67
NRT2-83.2	1.37	0.8	8.73	167	14.45	12.74
NRT2-90.6	1.32	0.8	8.74	167	14.43	12.71
NRT2-98.0	1.27	0.7	8.76	167	14.45	12.73
NRT2-105.4	1.37	0.8	8.77	167	14.45	12.76
NRT2-112.8	0.98	0.6	8.79	167	14.48	12.78
West Bank-116.5	0.00	-	-	-	-	-
Mean	1.18	0.69	8.65	167.13	14.44	12.71
Median	1.21	0.7	8.71	167	14.45	12.73
Standard Deviation	0.16	0.09	0.15	0.64	0.02	0.05
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy + Standard Deviation	-	-	0.35	0.64	0.17	0.25

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the reading for each parameter is correct.

TABLE 4-2B
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Naugatuck River Transect Number 3
May 3, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
East Bank-47.9	0.00	-	-	-	-	-
NRT3-51.3	0.75	0.5	8.57	145	13.79	13.45
NRT3-58.0	0.79	0.5	8.46	134	13.00	13.31
NRT3-64.7	0.76	0.5	8.42	156	13.00	13.28
NRT3-71.4	1.13	0.7	8.36	154	12.85	13.29
NRT3-78.1	1.41	0.8	8.35	157	12.8	13.34
NRT3-84.8	1.51	0.9	8.35	157	12.77	13.37
NRT3-91.5	1.66	1.0	8.34	157	12.75	13.36
NRT3-98.2	1.96	1.2	8.34	157	12.75	13.36
NRT3-104.9	1.87	1.2	8.34	157	12.73	13.36
NRT3-111.6	2.00	1.2	8.37	156	12.73	13.37
NRT3-118.3	1.67	1.0	8.35	158	12.73	13.41
NRT3-125.0	1.39	0.8	8.37	158	12.77	13.43
NRT3-131.7	1.16	0.7	8.39	157	12.80	13.45
NRT3-138.4	1.08	0.6	8.42	157	12.85	13.46
NRT3-145.1	0.68	0.4	8.43	156	12.88	13.51
West Bank-148.4	0.00	-	-	-	-	-
Mean	1.32	0.80	8.39	154.40	12.88	13.38
Median	1.39	0.80	8.37	157	12.80	13.37
Standard Deviation	0.46	0.28	0.06	6.47	0.27	0.07
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy ± Standard Deviation	-	-	0.26	±6.67	0.42	0.27

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the readi ıg for each parameter is correct.

TABLE 4-2C
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Naugatuck River Transect Number 4
May 4, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
East Bank-24.0	0.00	-	-	-	-	-
NRT4-27.2	1.08	0.6	8.61	174	13.72	13.24
NRT4-34.7	1.22	0.7	8.56	174	13.36	13.10
NRT4-42.2	1.93	1.2	8.49	175	13.16	13.04
NRT4-49.7	2.19	0.4	8.43	175	13.08	12.97
		1.3	8.42	175	13.07	12.97
		1.8	8.41	175	13.05	12.95
NRT4-57.2	1.91	1.2	8.40	175	13.05	12.95
NRT4-64.7	1.68	1.0	8.39	175	13.05	12.97
NRT4-72.2	1.45	0.9	8.38	175	13.06	13.04
NRT4-79.7	1.16	0.7	8.41	175	13.06	13.12
NRT4-87.2	1.26	0.8	8.41	175	13.09	13.29
NRT4-94.7	1.14	0.7	8.41	175	13.09	13.34
NRT4-102.2	1.36	0.8	8.42	174	13.09	13.28
NRT4-109.7	1.39	0.8	8.43	175	13.08	13.26
NRT4-117.2	1.95	1.2	8.44	175	13.08	13.40
NRT4-124.7	1.75	1.1	8.45	175	13.08	13.51
NRT4-132.2	1.50	0.9	8.45	175	13.09	13.46
West Bank-136.0	0.00	-	-	-	-	-
Mean	1.53	0.95	8.44	174.82	13.13	13.17
Median	1.45	0.90	8.43	175	13.08	13.24
Standard Deviation	0.35	0.33	0.06	0.39	0.17	0.19
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy + Standard Deviation	-	-	0.26	0.39	0.32	0.39

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the reading for each parameter is correct.

TABLE 4-2D
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Branch Brook Transect Number 2
April 28, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
South Bank-7.0	0.00	-	-	-	-	-
BBT2-8.25	0.58	0.4	7.42	103	13.13	10.26
BBT2-10.75	1.29	0.8	7.37	103	13.11	10.26
BBT2-13.25	1.62	1.0	7.35	103	13.09	10.40
BBT2-15.75	1.51	0.9	7.31	103	13.08	10.44
BBT2-18.25	1.39	0.8	7.28	104	13.08	10.45
BBT2-20.75	1.12	0.7	7.27	104	13.09	10.49
BBT2-23.25	1.08	0.6	7.25	104	13.11	10.44
BBT2-25.75	0.99	0.6	7.24	102	13.11	10.43
BBT2-28.25	1.03	0.6	7.23	103	13.13	10.47
BBT2-30.75	1.13	0.7	7.21	102	13.13	10.48
BBT2-33.25	0.97	0.6	7.19	103	13.14	10.50
BBT2-35.75	1.13	0.7	7.18	102	13.14	10.51
BBT2-38.25	1.14	0.7	7.18	102	13.18	10.54
BBT2-40.75	1.22	0.7	7.17	102	13.19	10.54
BBT2-43.25	0.98	0.6	7.15	103	13.21	10.53
North Bank-44.5	0.00	-	-	-	-	-
Mean	1.15	0.69	7.25	102.87	13.13	10.45
Median	1.13	0.70	7.24	103	13.13	10.47
Standard Deviation	0.25	0.14	0.08	0.74	0.04	0.09
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy + Standard Deviation	-	-	0.28	0.74	0.19	0.29

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the reading for each parameter is correct.

TABLE 4-2E
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Branch Brook Transect Number 3
April 28, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
East Bank-12.0	0.00	-	-	-	-	-
BBT3-13.35	0.58	0.4	7.08	105	12.36	10.02
BBT3-16.05	1.62	0.3	7.04	104	12.19	10.25
		1.3	7.08	105	12.22	10.30
BBT3-18.75	2.10	0.4	7.05	104	12.14	10.24
		1.3	7.07	105	12.14	10.20
		1.7	7.10	105	12.13	10.40
BBT3-21.45	2.43	0.5	7.07	106	12.09	10.52
		1.5	7.07	105	12.11	10.30
		1.9	7.09	105	12.11	10.43
BBT3-24.15	2.94	0.6	7.42	105	11.65	10.22
		1.8	7.35	105	11.67	10.53
		2.3	7.33	105	11.68	10.44
BBT3-26.85	2.72	0.5	7.24	104	11.72	10.49
		1.6	7.25	106	11.70	10.47
		2.2	7.29	105	11.68	10.44
BBT3-29.55	2.65	0.5	7.22	105	11.73	10.51
		1.6	7.21	105	11.75	10.58
		2.1	7.21	105	11.76	10.65
BBT3-32.25	2.54	0.5	7.15	105	11.80	10.43
		1.5	7.16	105	11.78	10.65
		2.0	7.19	105	11.76	10.57
BBT3-34.95	2.50	0.5	7.14	105	11.81	10.41
		1.5	7.14	105	11.83	10.59
		2.0	7.15	105	11.83	10.59
BBT3-37.65	2.29	0.5	7.11	101	11.86	10.46
		1.4	7.12	103	11.85	10.46
		1.8	7.15	105	11.85	10.59
BBT3-40.35	2.19	0.4	7.14	105	11.88	10.48
		1.3	7.11	105	11.88	10.59
		1.8	7.11	105	11.90	10.50
BBT3-43.05	1.75	0.4	7.10	105	11.91	10.40
		1.4	7.12	105	11.90	10.38
BBT3-45.75	1.67	0.3	7.09	105	11.93	10.08
		1.3	7.12	106	11.95	10.37
BBT3-48.45	1.34	0.3	7.12	106	11.96	10.20
		1.0	7.11	106	11.98	10.38
BBT3-51.15	0.78	0.5	7.12	107	11.96	10.18
West Bank-52.0	0.00	-	-	-	-	-
Mean	2.01	1.16	7.15	104.95	11.90	10.41
Median	2.19	1.30	7.12	105	11.88	10.44
Standard Deviation	0.70	0.66	0.09	0.94	0.18	0.16
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy + Standard Deviation	-	-	0.29	0.94	0.33	0.36

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the reading for each parameter is correct.

TABLE 4-2F
PRELIMINARY SAMPLING RESULTS
Water Quality Data
Branch Brook Transect Number 4
April 29, 1994

Station (1) (feet)	Total Water Depth (feet)	Sampling Depth (feet)	pH (2) (Standard Units)	Specific Conductance (2) (umhos/cm)	Temperature (2) (degrees celsius)	Dissolved Oxygen (2) (mg/l)
Bank-0.0	0.00	-	-	-	-	-
BBT4-1.1	0.22	0.1	6.97	95	11.10	10.28
BBT4-3.3	0.60	0.4	6.96	95	11.09	10.29
BBT4-5.5	1.00	0.6	6.95	95	11.09	10.36
BBT4-7.7	1.27	0.3	6.97	95	11.11	10.47
		1.0	6.98	95	11.09	10.41
BBT4-9.9	1.59	0.3	6.96	95	11.14	10.52
		1.3	6.99	95	11.14	10.50
BBT4-12.1	1.60	0.3	7.00	95	11.18	10.52
		1.3	7.01	95	11.16	10.51
BBT4-14.3	1.94	0.4	7.00	95	11.18	10.54
		1.6	7.03	95	11.18	10.54
BBT4-16.5	2.00	0.4	6.98	94	11.21	10.56
		1.6	7.02	96	11.19	10.53
BBT4-18.7	1.98	0.4	7.00	95	11.22	10.59
		1.6	7.00	95	11.22	10.57
BBT4-20.9	1.99	0.4	7.01	95	11.26	10.59
		1.6	7.01	95	11.24	10.58
BBT4-23.1	1.93	0.4	7.01	94	11.26	10.57
		1.5	7.00	95	11.27	10.53
BBT4-25.3	1.88	0.4	7.01	95	11.31	10.50
		1.5	7.01	96	11.29	10.49
BBT4-27.5	1.52	0.3	7.02	92	11.32	10.20
		1.2	7.02	95	11.34	10.28
BBT4-29.7	1.10	0.3	7.01	96	11.36	10.08
		0.9	7.02	95	11.36	10.10
BBT4-31.9	0.64	0.4	7.01	95	11.36	10.08
Bank-33.0	0.00	-	-	-	-	-
Mean	1.42	0.79	7.00	94.92	11.22	10.43
Median	1.59	0.40	7.005	95	11.215	10.505
Standard Deviation	0.59	0.54	0.02	0.74	0.09	0.17
Accuracy (4)	-	-	±0.20	±1% of range	±0.15	±0.20
Accuracy + Standard Deviation	-	-	0.22	0.74	0.24	0.37

Notes:

1. Station numbers indicate fifteen equal increments of 2.5 feet across a stream width of 37.5 feet.
2. Water quality measurements (pH, Specific Conductance, Temperature, and Dissolved Oxygen) were collected with a Hydrolab Corporation H20 Scout 2 System.
3. The width of the river was divided into fifteen increments. Water depth measurements were collected at the midpoint of each increment. The H20 Scout 2 System maintains separate probes for each individual water quality parameter. Therefore, due to differences in probe length, at depths less than two feet, water quality measurements were collected at 60% of the total depth only. At depths greater than two feet, water quality measurements were collected at 20%, 60% and 80% of the total depth.
4. The standard accuracy for the H2O Scout 2 System provides a range of reliability that the reading for each parameter is correct.

TABLE 4-3
DISPERSION ZONE DATA

Naugatuck River

Transect	NRT-2 (3)		NRT-3		NRT-4	
Date	5/3/94	10/4/94	5/3/94	10/4/94	5/3/94	10/4/94
Stream Width (feet) = w	111.0	109.0	100.5	100.0	112.0	111.0
Stream Depth (average) (feet) = d	1.18	0.80	1.32	1.02	1.53	1.17
Stream Velocity (average) (feet/sec) = u	1.43	1.04	1.21	0.65	1.03	0.54
Estimated Stream Slope (%) (feet/feet) = s	0.03%	0.03%	0.11%	0.11%	0.28%	0.29%
Dispersion Zone Length (feet) = L	93235	117131	28546	22351	15158	11469

Branch Brook

Transect	BBT-2 (3)		BBT-3		BBT-4	
Date	4/28/94	10/5/94	4/28/94	10/5/94	4/28/94	10/5/94
Stream Width (feet) = w	37.5	37.2	40.0	46.6	33.0	31.4
Stream Depth (average) (feet) = d	1.15	0.88	2.01	2.74	1.42	1.33
Stream Velocity (average) (feet/sec) = u	1.47	0.86	0.57	0.16	0.96	0.52
Estimated Stream Slope (%) (feet/feet) = s	0.50%	0.50%	0.78%	0.20%	0.07%	0.28%
Dispersion Zone Length (feet) = L	2785	2395	426	201	2743	742

Notes:

1. Stream width, stream depth, and stream velocity measurements are provided in Appendix C.
2. Stream slope was estimated by calculating the surface water change in elevation from the nearest upgradient transect to the measured transect and by dividing that number by the distance between the transects.
3. The stream slopes for BBT-2 and NRT-2 for the October event were estimated based on data collected during the May event.
4. Dispersion Zone legth L = (0.4*w^2*u)/(0.6*d*(g*d*s)^0.5). The 'g' in the formula stands for acceleration due to gravity (32.2 feet/sec^2).

TABLE 4-4A
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 1
May 2, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	NRT1-(-3)	-	0.0 - 0.6	Light brown, fine SAND, some SILT
-	Bank-7.0	-	-	-
2	NRT1-9.1	0.2	0.0 - 0.1	Light gray, fine SAND, trace SILT
			0.1 - 0.4	Olive, coarse SAND and GRAVEL, trace SILT
3	NRT1-13.3	0.0	Refusal	Brown, large COBBLES.
4	NRT1-17.5	0.0	Refusal	Brown, large COBBLES.
5	NRT1-21.7	0.0	Refusal	Brown, large COBBLES.
6	NRT1-25.9	0.0	Refusal	Brown, large COBBLES.
7	NRT1-30.1	0.0	Refusal	Brown, large COBBLES.
8	NRT1-34.3	0.0	Refusal	Brown, large COBBLES.
9	NRT1-38.5	0.0	Refusal	Brown, large COBBLES.
10	NRT1-42.7	0.0	Refusal	Brown, large COBBLES.
11	NRT1-46.9	0.0	Refusal	Brown, large COBBLES.
12	NRT1-51.1	0.9	0.0 - 0.3	Brown, coarse SAND and GRAVEL (sediment between COBBLES).
			0.3 - 0.6	Yellow-gray, fine to medium SAND (sediment between COBBLES).
13	NRT1-55.3	0.0	Refusal	Brown, large COBBLES.
14	NRT1-59.5	0.2	0.0 - 0.3	Yellow-gray, medium to coarse SAND (sediment between COBBLES).
15	NRT1-63.7	0.3	0.0 - 0.3	Yellow-gray, medium to coarse SAND and GRAVEL (between COBBLES).
			0.3 - 0.4	Dark gray, medium to coarse SAND and GRAVEL (between COBBLES).
16	NRT1-67.9	0.3	0.0 - 0.4	Dark gray, medium to coarse SAND and GRAVEL (between COBBLES).
-	Bank-70.0	-	-	-
17	NRT1-76.0	-	0.0 - 0.5	Light brown, SAND and SILT.

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of the Naugatuck River was encountered at the 7.0 foot mark on the western bank and at 70.0 feet on the eastern bank. Fifteen equal increments of 4.2 feet were identified and sample stations were located in the center of each increment. One sample was collected from each of the eastern and western bank full flood plains.
3. Riverbottom cobbles generally range from 10 to 18 inches in diameter at this transect, with a select few as large as 36 inches.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4B
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 2
May 2, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
-	Bank-5.5	-	-	-
1	NRT2-9.2	0.05	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL, little Silt
			0.4 - 0.6	Gray, medium to coarse SAND and fine GRAVEL, little Silt
2	NRT2-16.6	0.05	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
			0.4 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
3	NRT2-24.0	0.05	0.0 - 0.1	Olive, coarse SAND.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
			0.4 - 0.6	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
4	NRT2-31.4	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Olive, medium to coarse SAND and fine GRAVEL.
5	NRT2-38.8	0.0	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL.
			0.4 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
6	NRT2-46.2	0.0	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL.
			0.4 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
7	NRT2-53.6	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
8	NRT2-61.0	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
9	NRT2-68.4	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
10	NRT2-75.8	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
11	NRT2-83.2	0.05	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
12	NRT2-90.6	0.0	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
			0.4 - 0.6	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
13	NRT2-98.0	0.05	0.0 - 0.1	Olive, coarse SAND and GRAVEL.
			0.1 - 0.4	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
			0.4 - 0.6	Gray, medium to coarse SAND and fine GRAVEL, little Silt.
14	NRT2-105.4	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
15	NRT2-112.8	0.1	0.0 - 0.2	Brown, coarse SAND and GRAVEL.
			0.2 - 0.7	Olive, medium to coarse SAND and fine GRAVEL, little Silt.
-	Bank-116.5	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of the Naugatuck River was encountered at the 5.5 foot mark on the western bank and at 116.5 feet on the eastern bank. Fifteen equal increments of 7.4 feet were identified and sample stations were located in the center of each increment. No samples were collected from the bank full flood plain.
3. Sample descriptions above exclude cobbles and coarse gravel because the riverbottom at this transect is approximately 70% sand and fine gravel. At other transects along the Naugatuck cobbles cover as much as 95% of the riverbottom.
4. Riverbottom cobbles generally range from 3 to 10 inches in diameter at this transect.
5. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4C
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 3
May 3, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	NRT3-28.0	-	0.0 - 0.6	Brown, fine SAND and SILT.
2	NRT3-45.0	-	0.0 - 0.6	Dark gray, fine SAND and SILT with reddish-brown mottles.
-	Bank-47.9	-	-	-
3	NRT3-51.3	0.1	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
4	NRT3-58.0	0.1	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
5	NRT3-64.7	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
6	NRT3-71.4	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
7	NRT3-78.1	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
8	NRT3-84.8	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
9	NRT3-91.5	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
10	NRT3-98.2	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light reddish-brown, medium to coarse SAND and GRAVEL.
11	NRT3-104.9	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light reddish-brown, medium to coarse SAND and GRAVEL.
12	NRT3-111.6	0.1	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
13	NRT3-118.3	0.1	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light gray, medium to coarse SAND and GRAVEL.
14	NRT3-125.0	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light reddish-brown, medium to coarse SAND and GRAVEL.
15	NRT3-131.7	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light reddish-brown, medium to coarse SAND and GRAVEL.
16	NRT3-138.4	0.0	0.0 - 0.6	Brown COBBLES and GRAVEL, little Sand amongst Cobbles.
			0.4 - 0.6	Light reddish-brown, medium to coarse SAND and GRAVEL.
17	NRT3-145.1	0.1	0.0 - 0.2	Brown, medium to coarse SAND and GRAVEL.
			0.2 - 0.6	Brown, fine to medium SAND, trace Silt.
-	Bank-148.4	-	-	-
18	NRT3-151	-	0.0 - 0.6	Brown, fine SAND and SILT.

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of the Naugatuck River was encountered at the 47.9 foot mark on the western bank and at 148.4 feet on the eastern bank. Fifteen equal increments of 6.7 feet were identified and sample stations were located in the center of each increment. Two samples were collected from the bank full flood plain on the western bank of the river, while one sample was collected from the eastern bank.
3. A "-" indicates that the depth of soft sediment was not collected.
4. Riverbottom cobbles generally range from 3 to 14 inches in diameter at this transect, with a select few as large as 24 inches.

TABLE 4-4D
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 4
May 3, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
-	Bank-24.0	-	-	-
1	NRT4-27.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL, trace Silt.
2	NRT4-34.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
3	NRT4-42.2	0.2	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
4	NRT4-49.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
5	NRT4-57.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
6	NRT4-64.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
7	NRT4-72.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
8	NRT4-79.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
9	NRT4-87.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
10	NRT4-94.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
11	NRT4-102.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
12	NRT4-109.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
13	NRT4-117.2	0.2	Refusal	Brown, COBBLES and GRAVEL.
14	NRT4-124.7	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
15	NRT4-132.2	0.1	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light olive, medium to coarse SAND and GRAVEL.
-	Bank-136.0	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of the Naugatuck River was encountered at the 24.0 foot mark on the western bank and at 136.0 feet on the eastern bank. Fifteen equal increments of 7.5 feet were identified and sample stations were located in the center of each increment. No samples were collected from the bank full flood plain.
3. Riverbottom cobbles generally range from 3 to 10 inches in diameter at this transect with a select few as large as 24 inches.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4E
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 5
May 5, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	NRT5-6.0	-	0.0 - 0.4	Dark brown fine SAND andSILT. (Cobbles cover most of western bank.)
-	Bank-8.0	-	-	-
2	NRT5-10.2	0.0	Refusal	Brown, large COBBLES.
3	NRT5-14.7	0.0	Refusal	Brown, large COBBLES.
4	NRT5-19.2	0.0	Refusal	Brown, large COBBLES.
5	NRT5-23.7	0.0	Refusal	Brown, large COBBLES.
6	NRT5-28.2	0.0	Refusal	Brown, large COBBLES.
7	NRT5-32.7	0.0	Refusal	Brown, large COBBLES.
8	NRT5-37.2	0.1	Refusal	Brown, large COBBLES.
9	NRT5-41.7	0.0	Refusal	Brown, large COBBLES.
10	NRT5-46.2	0.0	Refusal	Brown, large COBBLES.
11	NRT5-50.7	0.0	Refusal	Brown, large COBBLES.
-	Bank-53.0	-	-	-
12	NRT5-75.0	-	0.0 - 0.1	Brown, fine SAND and SILT.
			0.1 - 0.7	Medium, yellow SAND, little Silt.
13	NRT5-115.0	-	0.0 - 0.1	Brown, fine SAND and SILT.
			0.1 - 1.4	Medium, yellow SAND, little Silt.
-	Bank-144.0	-	-	-
14	NRT5-146.0	0.1	Refusal	Brown, COBBLES.
15	NRT5-150.0	0.0	0.0 - 0.2	Brown, coarse SAND and GRAVEL (sediment between Cobbles).
16	NRT5-154.0	0.1	Refusal	Brown, COBBLES.
17	NRT5-158.0	0.0	Refusal	Brown, COBBLES.
18	NRT5-162.0	0.1	Refusal	Brown, COBBLES.
-	Bank-164.0	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The Naugatuck River splits into two channels approximately 160 feet north of Naugatuck River Transect Number 5. For the western channel, the water's edge of the Naugatuck River was encountered at the 8.0 foot mark on the western bank and at 53.0 feet on the eastern bank. For the eastern channel, the water's edge was encountered at the 144.0 foot mark on the western bank and at 164.0 feet on the eastern bank. Ten samples were collected from the western channel while five samples were collected from the eastern channel. In addition, two samples were collected from the island and one from the western bank.
3. Riverbottom cobbles generally range from 10 to 18 inches in diameter in the western channel and from 3 to 12 inches in the eastern channel.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4F
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Transect Number 6
May 6, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	NRT6-2.0	-	0.0 - 0.4	Brown, fine SAND and SILT, some coarse particulate Organic Matter.
-	Bank-6.0	-	-	-
2	NRT6-9.5	0.0	Refusal	Brown COBBLES.
3	NRT6-16.4	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL.
4	NRT6-23.3	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
5	NRT6-30.2	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
6	NRT6-37.1	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
7	NRT6-44.0	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
8	NRT6-50.9	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
9	NRT6-57.8	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
10	NRT6-65.7	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
11	NRT6-72.6	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
12	NRT6-79.5	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.6	Light brown, fine to coarse SAND, little fine Gravel.
13	NRT6-86.4	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.5	Light brown, fine to coarse SAND, some fine Gravel, trace Silt.
14	NRT6-93.3	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.5	Light brown, fine to coarse SAND, some fine Gravel, trace Silt.
15	NRT6-100.2	0.1	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.6	Light brown, fine to coarse SAND, little fine Gravel.
16	NRT6-107.1	0.0	0.0 - 0.3	Brown COBBLES.
			0.3 - 0.4	Light gray, medium to coarse SAND and GRAVEL
-	Bank-109.5	-	-	-
17	NRT6-117.0	-	0.0 - 0.3	Light brown, fine SAND and SILT.
			0.3 - 0.7	Light brown, fine SAND and SILT, little fine Gravel.

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of the Naugatuck River was encountered at the 6.0 foot mark on the western bank and at 109.5 feet on the eastern bank. Fifteen equal increments of 6.9 feet were identified and sample stations were located in the center of each increment. One sample was collected from each of the eastern and western bank full flood plains.
3. A "-" indicates that the depth of soft sediment was not collected.
4. At this transect, riverbottom cobbles generally range from 3 to 12 inches in diameter in the western half of the river and from 3 to 6 inches in the eastern portion of the river.

TABLE 4-4G
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number *1*
April 26, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	BBT1-1.6	0.5	0.0 - 0.2	Dark brown, fine SAND, some SILT.
			0.2 - 0.6	Olive, fine SAND, some Silt..
2	BBT1-4.8	0.7	0.0 - 0.2	Dark brown, fine SAND, some SILT.
			0.2 - 0.6	Olive, fine SAND, some Silt..
			0.6 - 0.7	Olive, medium SAND, some Silt.
3	BBT1-8.0	0.5	0.0 - 0.5	Dark brown, fine SAND, some SILT.
4	BBT1-11.2	0.2	0.0 - 0.2	Dark brown, fine SAND, some SILT.
			0.2 - 0.4	Brown COBBLES and GRAVEL.
-	Bank-12.0	-	-	-
5	BBT1-14.4	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL.
			0.4 - 0.6	Brown, medium SAND, litt e Silt.
6	BBT1-17.6	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
7	BBT1-20.8	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive, fine to medium SAND, some Silt.
8	BBT1-24.0	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
9	BBT1-27.2	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL, some coarse Sand, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
10	BBT1-30.4	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
11	BBT1-33.6	0.0	0.0 - 0.4	Brown COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive, fine to medium SAND, some Silt.
12	BBT1-36.8	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
13	BBT1-40.0	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL, some coarse Sand, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
14	BBT1-43.2	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
15	BBT1-46.4	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Light brown, fine GRAVEL and coarse SAND, trace Organic Matter.
			0.6 - 0.7	Olive-yellow, fine to medium SAND.
-	Bank-49.5	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at the 12.0 foot mark on the southern bank and at 49.5 feet on the northern bank. Eleven samples were collected at increments of 3.2 feet between the river banks. Four additional samples were collected from the bank full flood plain on the southern bank of the brook.
3. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4H
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number 2
April 28, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	BBT2-4.0	0.8	0.0 - 0.4	Brown, fine SAND, some Silt. (Leaf litter on surface.)
			0.4 - 0.5	Yellow, fine to medium SAND, some Silt.
-	Bank-7.0	-	-	-
2	BBT2-8.25	0.75	0.0 - 0.2	Dark brown coarse particulate Organic Matter.
			0.2 - 06	Dark gray, fine SAND, some Silt.
3	BBT2-10.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
4	BBT2-13.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
5	BBT2-15.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
6	BBT2-18.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
7	BBT2-20.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
8	BBT2-23.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
9	BBT2-25.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
10	BBT2-28.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
11	BBT2-30.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
12	BBT2-33.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
13	BBT2-35.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
14	BBT2-38.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
15	BBT2-40.75	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
16	BBT2-43.25	0.0	0.0 - 0.4	Brown, COBBLES and GRAVEL.
			0.4 - 0.6	Yellow, medium to coarse SAND, some Gravel.
-	Bank-44.5	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at the 7.0 foot mark on the southern bank and at 44.5 feet on the northern bank. Fifteen equal increments of 2.5 feet were identified and sample stations were located in the center of each increment. One sample was collected from the bank full flood plain on the southern bank of the brook.
3. Coarse particulate Organic Matter indicates decomposed vegetation.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4I
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number 3
April 28, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
1	BBT3-3.7	3.2	0.0 - 0.2	Dark brown, fine SAND, some Silt.
			0.2 - 0.7	Olive-brown, fine SAND, little Silt..
2	BBT3-7.0	2.45	0.0 - 0.1	Coarse particulate Organic Matter (CPOM).
			0.1 - 0.7	Dark brown, fine to medium SAND, little Silt.
3	BBT3-10.3	4.3	0.0 - 0.2	Coarse particulate Organic Matter (CPOM).
			0.2 - 0.8	Dark brown, fine to medium SAND, little Silt.
-	Bank-12.0	-	-	-
4	BBT3-13.6	>6.0	0.0 - 0.2	Coarse particulate Organic Matter (CPOM).
			0.2 - 0.8	Dark brown, fine to medium SAND, little Silt.
5	BBT3-16.9	>6.0	0.0 - 0.2	Coarse particulate Organic Matter (CPOM).
			0.2 - 0.8	Dark brown, fine to medium SAND, little Silt.
6	BBT3-20.2	>5.0	0.0 - 0.6	Dark gray, fine to medium SAND, some CPOM.
7	BBT3-23.5	>5.0	0.0 - 0.6	Yellow, medium to coarse SAND, some Gravel.
8	BBT3-26.8	>5.0	0.0 - 0.6	Yellow, medium to coarse SAND, some Gravel.
9	BBT3-30.1	>5.0	0.0 - 0.4	Yellow, medium to coarse SAND and fine GRAVEL.
			0.4 - 1.0	Light gray, fine to medium SAND.
10	BBT3-33.4	>5.0	0.0 - 0.4	Yellow, medium to coarse SAND and GRAVEL.
			0.4 - 1.0	Light gray, fine to medium SAND.
11	BBT3-36.7	0.3	0.0 - 0.5	Yellow, medium to coarse SAND and GRAVEL.
12	BBT3-40.0	>5.0	0.0 - 0.6	Yellow, medium to coarse SAND and fine GRAVEL.
13	BBT3-43.3	3.6	0.0 - 0.15	Coarse particulate Organic Matter (CPOM).
			0.15 - 0.5	Gray, fine to medium SAND, some CPOM.
			0.5 - 0.6	Gray, fine to medium SAND.
14	BBT3-46.6	2.7	0.0 - 0.3	Coarse particulate Organic Matter (CPOM).
			0.3 - 0.6	Brown, fine to medium SAND, some Silt, some CPOM.
15	BBT3-49.9	>5.0	0.0 - 0.3	Coarse particulate Organic Matter (CPOM).
			0.3 - 0.6	Olive, fine to medium SAND, some CPOM, trace fine Gravel.
-	Bank-52.0	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at 12 feet on the western bank and at 52 feet on the eastern bank. Twelve equal increments of 3.3 feet were identified and sample stations were located in the center of each increment. Three samples were collected from the bank full flood plain on the western bank of the brook.
3. Coarse particulate Organic Matter indicates decomposed vegetation.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4J
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number 4
April 29, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
-	Bank-0.0	-	-	-
1	BBT4-1.1	0.3	0.0 - 0.15	Light gray, Clayey-SILT with reddish-brown mottles.
			0.15 - 0.6	Brown, coarse SAND and GRAVEL, little Silt.
2	BBT4-3.3	0.1	0.0 - 0.1	Light reddish-brown, Clayey-SILT.
			0.1 - 0.2	Brown, fine SAND, some Silt.
			0.2 - 0.6	Brown, coarse SAND and GRAVEL, little Silt..
3	BBT4-5.5	0.0	0.0 - 0.6	Light reddish-brown, coarse SAND and GRAVEL, trace Silt.
4	BBT4-7.7	0.0	0.0 - 0.6	Light reddish-brown, coarse SAND and GRAVEL, trace Silt.
5	BBT4-9.9	0.0	0.0 - 0.6	Light brown, coarse SAND and GRAVEL, little Silt.
6	BBT4-12.1	0.0	0.0 - 0.35	Light brown, coarse SAND and GRAVEL.
			0.35 - 0.5	Light brown, fine SAND and SILT.
			0.5 - 0.6	Light brown, coarse SAND and GRAVEL, little Silt.
7	BBT4-14.3	0.0	0.0 - 0.35	Light brown, coarse SAND and GRAVEL.
			0.35 - 0.5	Light brown, fine SAND and SILT.
			0.5 - 0.6	Light brown, coarse SAND and GRAVEL, little Silt.
8	BBT4-16.5	0.0	0.0 - 0.35	Light brown, coarse SAND and GRAVEL.
			0.35 - 0.5	Light brown, fine SAND and SILT.
			0.5 - 0.6	Light brown, coarse SAND and GRAVEL, little Silt.
9	BBT4-18.7	0.0	0.0 - 0.5	Light brown, coarse SAND and GRAVEL, trace Silt.
10	BBT4-20.9	0.0	0.0 - 0.5	Light brown, coarse SAND and GRAVEL, trace Silt.
11	BBT4-23.1	0.0	0.0 - 0.5	Light brown, coarse SAND and GRAVEL, trace Silt.
12	BBT4-25.3	0.3	0.0 - 0.5	Light brown, coarse SAND and GRAVEL, trace Silt.
13	BBT4-27.5	0.2	0.0 - 0.2	Brown, medium to coarse SAND and GRAVEL, trace Silt.
			0.2 - 0.5	Brown, medium SAND, trace Silt.
14	BBT4-29.7	0.8	0.0 - 0.2	Brown, medium to coarse SAND and GRAVEL, trace Silt.
			0.2 - 0.5	Brown, medium SAND, trace Silt.
15	BBT4-31.9	1.2	0.0 - 0.7	Light brown, medium SAND, little Gravel, little Silt..
-	Bank-33.0	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at the 0.0 foot mark on the western bank and at 33 feet on the eastern bank. Fifteen equal increments of 2.2 feet were identified and sample stations were located in the center of each increment.
3. This section of the river does not have a bank full flood plain; therefore, no samples were collected from either bank of the river.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4K
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number 5
April 27, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
-	Bank-4.0	-	-	-
1	BBT5-5.0	0.3	0.0 - 0.3	Brown, fine SAND and SILT, little Organic Matter.
			0.3 - 0.5	Brown, fine to medium SAND, little Gravel, little Silt.
2	BBT5-9.0	0.9	0.0 - 0.5	Black, fine SAND and SILT. (Hydrogen Sulfide odor.)
			0.5 - 0.9	Salt and pepper, medium SAND.
3	BBT5-13.0	2.45	0.0 - 0.3	Olive, medium SAND.
			0.3 - 0.45	Brown-gray, fine SAND, little Silt.
			0.45 - 0.7	Brown-gray, medium SAND and fine GRAVEL, little black hydrogen sulfide staining with odor.
4	BBT5-17.0	2.45	0.0 - 0.6	Salt and pepper. medium to coarse SAND, some fine Gravel.
5	BBT5-21.0	2.2	0.0 - 0.6	Olive, medium to coarse SAND, some fine Gravel.
			0.6 - 0.8	Gray, Clayey-SILT, little fine Sand.
6	BBT5-25.0	2.1	0.0 - 0.6	Olive, medium to coarse SAND, some fine Gravel.
			0.6 - 0.8	Gray, Clayey-SILT, little fine Sand.
7	BBT5-29.0	2.2	0.0 - 0.6	Olive, medium to coarse SAND, some fine Gravel.
			0.6 - 0.8	Gray, Clayey-SILT, little fine Sand.
8	BBT5-33.0	2.4	0.0 - 0.6	Olive, medium to coarse SAND, some fine Gravel.
			0.6 - 0.7	Olive, fine SAND and SILT.
9	BBT5-37.0	0.8	0.0 - 0.4	Olive, medium to coarse SAND, some fine Gravel.
			0.4 - 0.6	Reddish-brown, medium to coarse SAND, some fine Gravel.
10	BBT5-41.0	0.45	0.0 - 0.4	Olive, medium to coarse SAND, some fine Gravel.
			0.4 - 0.6	Reddish-brown, medium to coarse SAND, some fine Gravel.
11	BBT5-45.0	0.25	0.0 - 0.4	Olive, medium to coarse SAND, some fine Gravel.
			0.4 - 0.6	Reddish-brown, medium to coarse SAND, some fine Gravel.
12	BBT5-49.0	2.75	0.0 - 0.4	Olive, medium to coarse SAND, some fine Gravel.
			0.4 - 0.8	Reddish-brown, medium to coarse SAND, some fine Gravel.
			0.8 - 1.2	Black, fine to medium SAND, slight hydrogen sulfide odor. Thin coarse particulate Organic Matter layer observed at 1.0. (Black discoloration likely from hydrogen sulfide staining.)
13	BBT5-53.0	3.4	0.0 - 0.1	Coarse particulate Organic Matter (CPOM).
			0.1 - 0.6	Salt and pepper, medium to coarse SAND, some fine Gravel.
14	BBT5-57.0	4.6	0.0 - 0.6	CPOM, little fine Sand.
			0.6 - 0.8	Salt and pepper, fine to medium SAND.
15	BBT5-61.0	2.25	0.0 - 0.5	CPOM, little fine Sand.
			0.5 - 0.7	Gray, fine SAND and SILT, little CPOM.
-	Bank-61.5	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at 4.0 feet on the western bank and at 61.5 feet on the eastern bank. Fifteen samples were collected at increments of 4.0 feet between the river banks. This section of the brook does not have a bank full flood plain; therefore, no samples were collected from either bank of the brook.
3. Coarse particulate Organic Matter indicates decomposed vegetation.
4. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4L
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Transect Number 6
April 29, 1994

Sampling Sequence	Station (feet)	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
-	Bank-1.5	-	-	-
1	BBT6-2.5	0.0	0.0 - 0.4	Reddish-brown, coarse SAND and GRAVEL, trace Silt.
2	BBT6-4.6	0.0	Refusal	Brown COBBLES.
3	BBT6-6.7	0.0	Refusal	Brown COBBLES.
4	BBT6-8.8	0.0	0.0 - 0.3	Brown COBBLES, little fine to coarse Gravel amongst Cobbles.
5	BBT6-10.9	0.0	0.0 - 0.3	Brown COBBLES, little fine to coarse Gravel amongst Cobbles.
6	BBT6-13.0	0.0	Refusal	Brown COBBLES.
7	BBT6-15.1	0.0	Refusal	Brown COBBLES.
8	BBT6-17.2	0.0	Refusal	Brown COBBLES.
9	BBT6-19.3	0.0	0.0 - 0.5	Brown COBBLES, little coarse Gravel amongst Cobbles.
10	BBT6-21.4	0.0	Refusal	Brown COBBLES.
11	BBT6-23.5	0.0	0.0 - 0.4	Brown COBBLES, little fine to coarse Gravel, trace Sand.
12	BBT6-25.6	0.0	Refusal	Brown COBBLES.
13	BBT6-27.7	0.0	Refusal	Brown COBBLES.
14	BBT6-29.8	0.0	0.0 - 0.3	Brown COBBLES, little coarse Gravel amongst Cobbles.
15	BBT6-31.9	0.0	0.0 - 0.3	Brown COBBLES, little coarse Gravel, little Sand.
-	Bank-33.5	-	-	-

Notes:

1. Sediment samples were collected using a hand auger.
2. The water's edge of Branch Brook was encountered at the 1.5 foot mark on the western bank and at 33.5 feet on the eastern bank. Fifteen equal increments of 2.1 feet were identified and sample stations were located in the center of each increment. This section of the brook does not have a bank full flood plain; therefore, no samples were collected from either bank of the brook.
3. A "-" indicates that the depth of soft sediment was not collected.

TABLE 4-4M
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Naugatuck River Intermediate Sampling
May 10, 1994

Station	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
NRI-01	0.0	0.0 - 0.2	Brown, fine to medium SAND.
		0.2 - 0.6	Brown, coarse GRAVEL and COBBLES.
NRI-02	0.0	0.0 - 0.2	Brown, fine to medium SAND.
		0.2 - 0.6	Brown, coarse GRAVEL and COBBLES.
NRI-03	0.0	0.0 - 0.2	Brown, fine to medium SAND.
		0.2 - 0.6	Brown, coarse GRAVEL and COBBLES.
NRI-04	0.0	0.0 - 0.2	Brown, fine to medium SAND.
		0.2 - 0.6	Brown, coarse GRAVEL and COBBLES.
NRI-05	0.4	0.0 - 0.1	Brown, fine to medium SAND.
		0.1 - 1.6	Dark gray, fine to medium SAND.
NRI-06	0.7	0.0 - 0.7	Dark gray, fine to medium SAND and organic matter. (Hydrogen sulfide odor.)
NRI-07	1.9	0.0 - 0.4	Light gray, fine SAND and Clayey SILT.
		0.4 - 0.9	Dark gray, SILT and CLAY, little fine Sand.
		0.9 - 2.0	Black particulate organic matter, mixed with fine gravel and coarse sand.
NRI-08	0.4	0.0 - 0.2	Gray, soft, fine SAND and coarse particulate organic matter.
		0.2 - 0.6	Gray, fine SAND, some Silt with red mottles.
NRI-09	1.2	0.0 - 0.2	Gray, soft, fine SAND and coarse particulate organic matter.
		0.2 - 1.2	Dark gray, fine to medium SAND, with some organics.
NRI-10	1.2	0.0 - 0.2	Gray, soft, fine SAND and coarse particulate organic matter.
		0.2 - 1.2	Dark gray, fine to medium SAND, with some organics.
NRI-11	1.0	0.0 - 0.2	Gray, soft, fine SAND and coarse particulate organic matter.
		0.2 - 1.0	Dark gray, fine to medium SAND, with some organics.
NRI-12	0.4	0.0 - 0.4	Gray, Clayey SILT with red mottles, little fine Sand.
NRI-13	0.4	0.0 - 0.4	Gray, Clayey SILT with red mottles, little fine Sand.
NRI-14	0.9	0.0 - 0.9	Dark gray, Clayey SILT, little fine Sand with organics.
NRI-15	0.7	0.0 - 0.7	Gray, Clayey SILT, little fine Sand with organics.
NRI-16	0.9	0.0 - 0.2	Very loose organic matter.
		0.2 - 0.9	Gray, fine to medium SAND mixed with organic matter.
NRI-17	1.0	0.0 - 0.3	Very loose organic matter.
		0.3 - 1.0	Gray, fine to medium SAND mixed with organic matter.
NRI-18	0.8	0.0 - 0.1	Very loose, brown, fine SAND.
		0.1 - 0.8	Gray, fine to medium SAND mixed with organic matter.
NRI-19	0.5	0.0 - 0.1	Very loose, brown, fine SAND.
		0.1 - 0.5	Gray, fine to medium SAND mixed with organic matter.
NRI-20	0.8	0.0 - 0.5	Gray, fine to medium SAND, little Silt mixed with organic matter.
NRI-21	0.6	0.0 - 0.1	Brown, fine SAND and SILT with roots.
		0.1 - 0.3	Brown, medium SAND.
		0.3 - 0.6	Black, Clayey SILT, little fine Sand.

Notes:

1. Sediment samples were collected using a hand auger.
2. Locations for each intermediate sampling station are identified on Figure 4-1.
3. All intermediate samples along the Naugatuck River were collected from within five feet of the western bank of the river, biased to Envirite's Property.

TABLE 4-4N
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Intermediate Sampling
May 12, 1994

Station	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
BBI-01	0.1	0.0 - 0.4	Brown, fine to coarse SAND, some Gravel, little Silt (between cobbles).
		0.4 - 0.7	Gray, Silty CLAY, little fine Sand (below and between cobbles).
BBI-02	0.1	0.0 - 0.7	Brown, fine to coarse SAND, some Gravel, little Silt (between cobbles).
BBI-03	0.3	0.0 - 0.1	Brownish-orange, fine to coarse SAND, trace Silt.
		0.1 - 0.4	Brown, fine to coarse SAND, little Silt, little organic matter.
		0.4 - 0.6	Brown, fine to coarse SAND, some Gravel, little Silt.
BBI-04	0.3	0.0 - 0.2	Brown, fine to medium SAND, trace Silt.
		0.2 - 0.6	Brown, fine to coarse SAND, little Silt, little organic matter.
		0.6 - 0.8	Gray, Silty CLAY, little fine Sand, little organic matter.
BBI-05	0.1	0.0 - 0.6	Brown, medium to coarse SAND and fine GRAVEL.
BBI-6	0.3	0.0 - 0.5	Brown, medium to coarse SAND and GRAVEL.
BBI-07	0.2	0.0 - 0.5	Brown, fine to coarse SAND, some Gravel, trace Silt.
BBI-08	0.3	0.0 - 0.2	Brown, SILT and fine SAND, trace organic matter.
		0.2 - 0.6	Dark, grayish-brown, fine SAND, little Silt, little organic matter, little fine Gravel.
BBI-09	0.1	0.0 - 0.2	Brownish-gray, COBBLES and GRAVEL, some fine to coarse Sand, little Silty CLAY.
		0.2 - 0.4	Brown, Silty CLAY, some fine Sand, trace fine Gravel.
		0.4 - 0.5	Light brown, Silty CLAY, trace fine Gravel.
BBI-10	0.3	0.0 - 0.5	Olive, fine to medium SAND, little particulate organic matter.
		0.5 - 0.7	Grayish brown, fine to coarse SAND, some Gravel, trace Silt.
BBI-11	0.2	0.0 - 0.2	Grayish brown, fine SAND, little Silt, little organic matter, little fine Gravel.
		0.2 - 0.7	Brown, fine to coarse SAND, some fine Gravel, trace Silt.
BBI-12	0.8	0.0 - 0.3	Brown, fine SAND, little Silt, little coarse particulate organic matter.
		0.3 - 0.7	Tan, fine to coarse SAND, little Gravel, little Silt.
BBI-13	0.4	0.0 - 0.3	Light brown, fine SAND, little Silt, trace organic matter.
		0.3 - 0.8	Tan, fine to coarse SAND, little Gravel, little Silt.
BBI-14	>2.0	0.0 - 0.5	Brownish-gray, fine SAND, little Silt, with coarse particulate organic matter.
		0.5 - 0.9	Gray, fine to medium SAND, little Silt, trace organic matter.
BBI-15	3.0	0.0 - 0.5	Brownish-gray, fine loamy SAND, with coarse particulate organic matter.
		0.5 - 0.9	Gray, fine to medium SAND, little Silt, trace organic matter.
BBI-16	>3.0	0.0 - 0.1	Brownish-gray, fine to medium SAND and coarse particulate organic matter.
		0.1 - 0.7	Gray, fine to medium SAND, little Gravel.
BBI-17	>2.0	0.0 - 0.2	Brownish-gray, fine to medium SAND and coarse particulate organic matter.
		0.2 - 0.8	Brown, fine to coarse SAND, little Gravel, trace Silt.
BBI-18	>3.0	0.0 - 0.6	Brownish-gray, fine to medium SAND and coarse particulate organic matter.
BBI-19	0.5	0.0 - 0.4	Brown, fine SAND, some Silt.
		0.4 - 0.7	Brown, fine to coarse SAND, some Silt, little fine Gravel.
BBI-20	0.2	0.0 - 0.2	Light brown, fine to coarse SAND, little Silt, little fibrous organic matter.
		0.2 - 0.7	Light brown, fine to coarse SAND, little Silt, little fine Gravel.
BBI-21	0.2	0.0 - 0.2	Brown, fine to medium SAND, little Silt, trace fine Gravel..
		0.2 - 0.6	Brown, fine to coarse SAND and GRAVEL.
BBI-22	0.5	0.0 - 0.6	Brown, fine to medium SAND, little Silt, little organic matter.

TABLE 4-4N
SEDIMENT SURVEY DATA:
Sediment Thicknesses and Qualitative Descriptions
Branch Brook Intermediate Sampling
May 12, 1994

Station	Soft Sediment Depth (feet)	Depth (feet)	Soil Classification
BBI-23	0.0	0.0 - 0.4	Brown, COBBLES.
BBI-24	1.5	0.0 - 0.7	Brown, fine to coarse SAND, little fine Gravel, trace Silt.
BBI-25	>1.0	0.0 - 0.2	Coarse particulater organic matter (decomposing leaves).
		0.2 - 0.6	Loose, gray, fine to coarse SAND and GRAVEL.
BBI-26	>1.0	0.0 - 0.2	Brownish-gray, fine SAND, some Silt.
		0.2 - 0.6	Gray, Silty CLAY, little fine Sand.
BBI-27	2.0	0.0 - 0.7	Brownish-gray, fine to medium SAND, little Silt, trace organic matter.
BBI-28	0.2	0.0 - 0.2	Brown, SILT and fine SAND, little fine Gravel.
		0.2 - 0.6	Brown, fine to coarse SAND, little fine Gravel, little Silt.
BBI-29	0.2	0.0 - 0.4	Brown, SILT and fine SAND, little fine Gravel, little organic matter.
BBI-30	0.5	0.0 - 0.5	Brown, fine to coarse SAND, some Gravel.

Notes:

1. Sediment samples were collected using a hand auger.
2. Locations for each intermediate sampling station are identified on Figure 4-1.
3. All intermediate samples along the Branch Brook were collected from within ten feet of the eastern bank of the river,

TABLE 4-5
RESULTS OF PHYSICAL PARAMETER ANALYSES

Naugatuck River Sediment Samples
May 24, 1994

Sample Location	Sieve Description (Burmister)	Grain Density (3)	Cation Exchange (mg/kg as Na) (4)	TOC (mg/l)	pH (Standard Units)
NRI-05	Brown, f-m SAND, trace Silt.	2.71	680	2700	6.1
TNR-02	Brown, fine SAND, little (-) Silt.	2.68	1500	4900	5.8
NRI-09	Brown, f-m SAND, trace (-) Silt.	2.72	420	2500	5.5
NRI-11	Brown, f-m SAND, trace (+) Silt.	2.70	1200	5400	5.8
TNR-03	Brown, m-c SAND, some (+) Gravel, trace (-) Silt.	3.08	570	3300	6.7
NRI-13	Brown, f-m SAND, trace (+) Silt.	2.72	1000	6200	6.7
NRI-17	Brown, f-m SAND, trace (+) Silt.	2.69	1200	3600	6.6
TNR-04	Brown, f-m SAND, trace Silt.	2.71	540	6200	6.3
NRI-18	Brown, fine SAND, trace Silt.	2.70	1300	7500	6.0
NRI-20	Brown, fine SAND, trace (+) Silt.	2.70	3200	13000	6.4
Mode	-	2.70	1200	6200	5.8
Mean	-	2.74	1161	5530	6.2
Median	-	2.70	1100	5150	6.2
Standard Deviation	-	0.12	805	3107	0.4
2 Standard Deviations	-	0.24	1611	6214	0.8
3 Standard Deviations	-	0.36	2416	9321	1.3

Branch Brook Sediment Samples
May 23, 1994

Sample Location	Sieve Description (Burmister)	Grain Density (3)	Cation Exchange (mg/kg as Na) (4)	TOC (mg/l)	pH (Standard Units)
BBI-02	Brown, f-c GRAVEL and m-c SAND, trace (-) Silt.	2.98	390	1300	6.9
BBI-04	Brown, f-c SAND, little (+) Gravel, trace (-) Silt.	2.79	2300	6400	9.4
TBB-02	Brown, f-c GRAVEL and f-c SAND, trace (-) Silt.	2.89	1000	5000	6.8
BBI-10	Brown, f-c GRAVEL and m-c SAND, trace (-) Silt.	2.78	460	2200	6.3
BBI-12	Brown, f-m SAND, some (-) Gravel, trace Silt.	2.73	880	1900	6.3
TBB-03	Brown, m-c SAND, some (+) Gravel, trace (-) Silt.	2.79	620	28000	6.7
BBI-17	Brown f-m SAND, little (+) Gravel, trace Silt.	2.78	900	2700	6.6
TBB-04	Brown, f-m SAND, trace Gravel, trace (-) Silt.	2.71	340	1800	6.0
BBI-24	Brown, f-c SAND, little (+) Gravel, trace (-) Silt.	2.74	340	2200	6.6
BBI-28	Brown, f-c GRAVEL and f-c SAND, trace (-) Silt.	2.87	960	4800	6.8
Mode	-	2.79	340	2200	6.8
Mean	-	2.81	819	5630	6.8
Median	-	2.79	750	2450	6.7
Standard Deviation	-	0.08	584	8038	0.9
2 Standard Deviations	-	0.17	1168	16077	1.9
3 Standard Deviations	-	0.25	1751	24115	2.8

Notes:

1. Sediment samples were collected using a Wildlife Supply Company (Wildco) Model 2420-H45 sediment corer.
2. A "-" indicates statistical data was not reduced for this parameter.
3. Grain density is defined as the Specific Gravity of the sample.
4. Cation Exchange capacity reported as Sodium (Na).

TABLE 5-1
HABITAT CHARACTERISTICS OF BRANCH BROOK AND NAUGATUCK RIVER SAMPLING STATIONS
Envirite Facility
Thomaston, Connecticut

		SAMPLING STATIONS							
Channel Morphology		**BB-R1**	**BB-A1**	**BB-A2**	**BB-A3**	**NR-R1**	**NR-A1**	**NR-A2**	**NR-A3**
Channel Width (ft)		32	30	42	49	***	***	***	***
Bottom Width (ft)		30	27	35	44	***	***	***	***
Substrate*		90c/8g/2s	45c/45g/10s	49c/49g/2s	45c/45g/10s	70c/25g/5s	70c/20g/10s	40c/30g/30s	70c/g20/10s
Embeddedness(%)		5 to 10	10 to 50	10 to 20	10 to 50	20 to 30	20 to 30	40 to 50	50 to 60
Bank Height (ft)	Left	2	0.5	1	4.5	3	2.5	2	6
	Right	1.5	1	2	2.5	3	1.5	1.5	1.5
Bank Stability**	Left	fbs/shr/trs	fbs/sbs	fbs/trs	fbs/trs	fbs(ferns)	fbs/sbs/trs	fbs/trs/bdrs	riprap/fbs
	Right	fbs/sbs/trs	fbs/trs	fbs/trs	fbs/trs	fbs(ferns)	fbs(ferns)	fbs/trs/mud	fbs/mud
Water Column									
Stream Width (ft)		30	27	35	44	***	***	***	***
Stream Depth (ft)		1 to 2	0.5 to 3	1 to 3	1 to 2.5	0.5 to 2	0.5 to 2	0.5 to 1.5	1 to 2
Riparian Zone									
Bank Veg. Overhang (ft)		30	13	28	0	2	20	20	0
Overstory Canopy (%)		25	10	20	75	0	0	0	0

* expressed as percentage of cobble(c), gravel(g), and sand(s)

** composition and/or vegetative cover of bank (fbs=forbes, sbs=shrubs, trs=trees, bdrs=boulders)

*** data available in GZA report

TABLE 5-2
SPRING MACROINVERTEBRATE SAMPLING
SUMMARY OF RESULTS FOR BRANCH BROOK AND NAUGATUCK RIVER
MAY 19 AND 20, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	SAMPLING STATIONS							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
Coleoptera (beetles)								
Berosus	0	0	0	0	11	2	2	1
Stenelmis	0	0	0	0	0	0	1	1
Diptera (flies and midges)								
Antocha	0	1	0	1	0	1	4	11
Clinocera	0	0	0	1	0	0	0	0
Heterodromia	0	0	0	0	1	0	0	0
Chironomidae								
Ablabesmyia	3	1	0	3	1	0	0	0
Cricotopus	0	0	0	0	4	4	3	4
Cryptochironomus	0	0	0	0	0	2	0	2
Diamesa	0	0	0	0	0	0	4	0
Dicrotendipes	0	0	0	0	3	3	0	0
Orthocladius	0	0	0	0	9	13	19	8
Polypedilum	0	0	0	0	10	9	4	10
Tanytarsus	0	0	0	0	0	1	0	0
Thienemannimyia	0	0	0	0	1	0	1	1
Simuiidae	0	0	0	0	0	0	5	0
Tipulidae	0	0	6	1	0	0	0	0
pupae	1	0	1	1	5	4	12	4
Ephemeroptera (mayflies)								
Acentrella	5	1	0	1	4	9	34	5
Baetis	0	0	0	0	9	20	25	8
Caenis	0	0	0	0	1	2	0	0
Dannella	0	0	0	0	0	0	1	2
Drunella	46	57	91	60	0	0	0	0
Ephemerella	3	0	0	2	2	0	0	0
Eurylophella	0	0	0	0	4	7	2	0
Isonychia	3	2	8	10	7	7	8	5
Serratella	0	2	3	1	0	0	0	0
Stenacron	0	0	0	0	0	1	0	1
Stenonema	1	1	0	0	18	16	7	11
Megaloptera (dobsonflies)								
Corydalus	0	0	0	0	0	0	0	2
Nigronia	0	2	8	5	0	0	0	0
Odonata (damselflies and dragonflies)								
Argia	0	0	0	0	1	1	0	0
Boyeria	0	0	1	0	0	0	0	0
Enallagma	0	0	0	0	0	1	0	0
Gomphus	0	0	0	0	0	0	0	1
Plecoptera (stoneflies)								
Acroneuria	12	4	0	1	0	0	0	0
Trichoptera (caddisflies)								
Cheumatopsyche	13	2	3	6	17	14	13	43
Chimarra	4	0	1	2	0	0	0	0
Dolophilodes	0	0	0	0	0	0	1	0
Hydropsyche	26	16	16	12	8	5	9	13

TABLE 5-2
SPRING MACROINVERTEBRATE SAMPLING
SUMMARY OF RESULTS FOR BRANCH BROOK AND NAUGATUCK RIVER
MAY 19 AND 20, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	SAMPLING STATIONS							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
Trichoptera (caddisflies), Cont.								
Polycentropus	0	0	0	0	0	0	1	0
Pycnopsyche	0	1	2	0	0	0	0	0
Rhyacophila	0	3	0	0	0	0	0	0
Hydroptilidae	0	0	0	0	0	0	0	1
pupae	0	0	0	0	0	0	0	2
TOTAL INSECT TAXA	**10**	**13**	**10**	**14**	**18**	**19**	**19**	**19**
TOTAL INSECT SPECIMENS	**117**	**93**	**140**	**107**	**116**	**122**	**156**	**136**

NON-INSECT TAXA	SAMPLING STATIONS							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
Annelida (segmented worms)								
Oligochaeta	0	1	0	2	1	4	2	2
Hirudinae	0	0	0	0	0	1	0	0
Mollusca (clams and snails)								
Pisidiidae	0	0	0	0	1	0	0	0
Physa	1	0	0	0	0	0	0	0
Gyraulus	1	1	1	0	0	0	0	0
Crustacea								
Amphipoda	0	0	0	0	0	2	0	0
TOTAL NON-INSECT TAXA	**2**	**2**	**1**	**1**	**2**	**3**	**1**	**1**
TOTAL NON-INSECT SPECIMENS	**2**	**2**	**1**	**2**	**2**	**7**	**2**	**2**

TOTAL TAXA	**12**	**15**	**11**	**15**	**20**	**22**	**20**	**20**
TOTAL SPECIMENS	**119**	**95**	**141**	**109**	**118**	**129**	**158**	**138**

TABLE 5-3
CALCULATIONS OF HILSENHOFF BIOTIC INDEX
BRANCH BROOK SPRING SAMPLING
MAY 19 AND 20, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	Tolerance Value	Calculations							
		BB-R1	BB-A1	BB-A2	BB-A3	BB-R1	BB-A1	BB-A2	BB-A3
Coleoptera (beetles)									
Berosus	5	0	0	0	0				
Stenelmis	5	0	0	0	0				
Diptera (flies and midges)									
Ablabesmyia	8	3	1	0	3	24	8		24
Antocha	3	0	1	0	1		3		3
Clinocera	6	0	0	0	1				6
Heterodromia	6	0	0	0	0				
Simuiidae	6	0	0	0	0				
Tipulidae	3	0	0	6	1			18	3
pupae	na	1	0	1	1				
Ephemeroptera (mayflies)									
Acentrella	4	5	1	0	1	20	4		4
Baetis	5	0	0	0	0				
Caenis	7	0	0	0	0				
Dannella	2	0	0	0	0				
Drunella	0	46	57	91	60	0	0	0	0
Ephemerella	2	3	0	0	2	6			4
Eurylophella	4	0	0	0	0				
Isonychia	2	3	2	8	10	6	4	16	20
Serratella	2	0	2	3	1		4	6	2
Stenacron	6	0	0	0	0				
Stenonema	3	1	1	0	0	3	3		
Megaloptera (dobsonflies)									
Corydalus	6	0	0	0	0				
Nigronia	4	0	2	8	5		8	32	20
Odonata (damselflies and dragonflies)									
Argia	7	0	0	0	0				
Boyeria	2	0	0	1	0			2	
Enallagma	9	0	0	0	0				
Gomphus	5	0	0	0	0				
Plecoptera (stoneflies)									
Acroneuria	0	12	4	0	1	0	0		0
Trichoptera (caddisflies)									
Cheumatopsyche	5	13	2	3	6	65	10	15	30
Chimarra	4	4	0	1	2	16		4	8
Dolophilodes	0	0	0	0	0				
Hydropsyche	4	26	16	16	12	104	64	64	48
Marilia	0	0	0	0	0				
Polycentropus	6	0	0	0	0				
Pycnopsyche	4	0	1	2	0		4	8	
Rhyacophila	0	0	3	0	0		0		
Hydroptilidae	4	0	0	0	0				
pupae	na	0	0	0	0				
TOTAL INSECT SPECIMENS		117	93	140	107				
product sums						244	112	165	172
TOTAL INSECT TAXA						10	13	10	14
MODIFIED HILSENHOFF BIOTIC INDEX						2.1	1.2	1.2	1.6

TABLE 5-4
CALCULATIONS OF HILSENHOFF BIOTIC INDEX
NAUGATUCK RIVER SPRING SAMPLING
MAY 19 AND 20, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	Tolerance Value	Calculations							
		NR-R1	NR-A1	NR-A2	NR-A3	NR-R1	NR-A1	NR-A2	NR-A3
Coleoptera (beetles)									
Berosus	5	11	2	2	1	55	10	10	5
Stenelmis	5	0	0	1	1			5	5
Diptera (flies and midges)									
Antocha	3	0	1	4	11		3	12	33
Clinocera	6	0	0	0	0				
Heterodromia	6	1	0	0	0	6			
Chironomidae									
Ablabesmyia	8	1	0	0	0	8			
Cricotopus	7	4	4	3	4	28	28	21	28
Cryptochironomus	8	0	2	0	2		16		16
Diamesa	5	0	0	4	0			20	
Dicrotendipes	8	3	3	0	0	24	24		
Orthocladius	6	9	13	19	8	54	78	114	48
Polypedilum	6	10	9	4	10	60	54	24	60
Tanytarsus	6	0	1	0	0		6		
Thienemannimyia	7	1	0	1	1	7		7	7
Simuiidae	6	0	0	5	0			30	
Tipulidae	3	0	0	0	0				
pupae	na	5	4	12	4				
Ephemeroptera (mayflies)									
Acentrella	4	4	9	34	5	16	36	136	20
Baetis	5	9	20	25	8	45	100	125	40
Caenis	7	1	2	0	0	7	14		
Dannella	2	0	0	1	2			2	4
Drunella	0	0	0	0	0				
Ephemerella	2	2	0	0	0	4			
Eurylophella	4	4	7	2	0	16	28	8	
Isonychia	2	7	7	8	5	14	14	16	10
Serratella	2	0	0	0	0				
Stenacron	6	0	1	0	1		6		6
Stenonema	3	18	16	7	11	54	48	21	33
Megaloptera (dobsonflies)									
Corydalus	6	0	0	0	2				12
Nigronia	4	0	0	0	0				
Odonata (damselflies and dragonflies)									
Argia	7	1	1	0	0	7	7		
Boyeria	2	0	0	0	0				
Enallagma	9	0	1	0	0		9		
Gomphus	5	0	0	0	1				5
Plecoptera (stoneflies)									
Acroneuria	0	0	0	0	0				

TABLE 5-4
CALCULATIONS OF HILSENHOFF BIOTIC INDEX
NAUGATUCK RIVER SPRING SAMPLING
MAY 19 AND 20, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	Tolerance Value	Calculations							
		NR-R1	NR-A1	NR-A2	NR-A3	NR-R1	NR-A1	NR-A2	NR-A3
Trichoptera (caddisflies)									
Cheumatopsyche	5	17	14	13	43	85	70	65	215
Chimarra	4	0	0	0	0				
Dolophilodes	0	0	0	1	0			0	
Hydropsyche	4	8	5	9	13	32	20	36	52
Polycentropus	6	0	0	1	0			6	
Pycnopsyche	4	0	0	0	0				
Rhyacophila	0	0	0	0	0				
Hydroptilidae	4	0	0	0	1				4
pupae	na	0	0	0	2				
TOTAL INSECT SPECIMENS		**116**	**122**	**156**	**136**				
product sums						**522**	**571**	**658**	**603**
TOTAL INSECT TAXA						**18**	**19**	**19**	**19**
MODIFIED HILSENHOFF BIOTIC INDEX						**4.5**	**4.7**	**4.2**	**4.4**

TABLE 5-5
RESULTS OF EPA PROTOCOL III RAPID BIOASSESSMENT
SPRING SAMPLING BRANCH BROOK AND NAUGATUCK RIVER
Envirite Facility
Thomaston, Connecticut

PROTOCOL III METRICS, PERCENT COMPARABILITY, AND CONDITION SCORE	STATION NUMBER							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
1. Taxa Richness	12	15	11	15	20	22	20	20
A/R(100)	na	125%	92%	125%	na	110%	100%	100%
SCORE	6	6	6	6	6	6	6	6
2. Hilsenhoff Biotic Index	2.1	1.2	1.2	1.6	4.5	4.7	4.2	4.4
R/A(100)	na	175%	175%	131%	na	96%	107%	102%
SCORE	6	6	6	6	6	6	6	6
3. Functional Feeding Groups								
Scrapers/Filterers	1.2	3.0	3.3	2.1	1.1	1.8	1.90	0.4
A/R(100)	na	250%	275%	175%	na	164%	173%	36%
SCORE	6	6	6	6	6	6	6	4
4. EPT/Chironomidae	38	89	na*	32	2.5	2.5	3.3	3.6
A/R(100)	na	234%	na*	84%	na	100%	132%	144%
SCORE	6	6	6	6	6	6	6	6
5. Percent Contribution (dom.taxon)**	39%	60%	65%	55%	15%	16%	22%	31%
SCORE	2	0	0	0	6	6	4	2
6. EPT Index	9	10	7	9	9	9	10	9
A/R(100)	na	111%	78%	100%	na	100%	111%	100%
SCORE	6	6	2	6	6	6	6	6
7. Community Loss Index***	na	0.20	0.55	0.20	na	0.27	0.40	0.45
SCORE	6	6	4	6	6	6	6	6
TOTAL SCORE	38	36	30	36	42	42	40	36
% Comp. to Ref. Score	na	95%	79%	95%	na	100%	95%	86%
BIOLOGICAL CONDITION CATEGORY	na	non-impaired	slightly impaired	non-impaired	na	non-impaired	non-impaired	non-impaired

* no chironomids in sample BB-A2

** actual percent contribution evaluated, not percent comparability to reference station

*** values increase with increasing dissimilarity to reference station and decrease with similarity

TABLE 5-6
FALL MACROINVERTEBRATE SAMPLING
SUMMARY OF RESULTS FOR BRANCH BROOK AND NAUGATUCK RIVER
OCTOBER 18 AND 19, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	SAMPLING STATIONS							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
Coleoptera (beetles)								
Berosus	4	0	0	1	4	0	0	1
Dubiraphia	0	0	1	0	0	0	0	0
Ectopria	1	0	0	0	0	0	0	0
Optioservus	0	0	1	0	1	0	2	1
Diptera (flies and midges)								
Chironomidae	3	1	1	4	5	0	7	23
Prosimulium	3	0	0	0	1	0	0	0
Antocha	0	0	0	0	0	0	1	2
Ephemeroptera (mayflies)								
Arthroplia	0	17	0	0	0	0	0	0
Cloeon	0	0	0	0	2	2	4	5
Pseudocloeon	0	0	0	0	1	0	0	2
Ephemerella	0	0	3	0	0	0	0	0
Isonychia	5	0	0	14	1	22	4	12
Serratella	0	4	0	0	0	0	0	0
Stenonema	4	4	7	3	3	15	3	5
Megaloptera (dobsonflies)								
Corydalus	0	0	0	0	1	1	1	0
Nigronia	3	4	12	7	0	0	0	0
Odonata (damselflies and dragonflies)								
Boyeria	0	0	2	0	0	0	0	0
Ophiogomuphus	0	0	0	0	1	0	0	0
Plecoptera (stoneflies)								
Acroneuria	16	10	4	6	0	0	0	0
Taeniopteryx	0	0	0	0	0	0	0	2
Trichoptera (caddisflies)								
Cheumatopsyche	32	28	23	30	19	21	12	14
Chimarra	7	4	1	3	0	0	0	0
Glossosoma	0	1	0	0	0	0	0	0
Hydropsyche	43	48	26	48	66	53	127	55
Leucotrichia	0	0	0	0	1	3	3	4
Rhyacophila	0	1	0	0	0	0	0	0
TOTAL INSECT TAXA	**11**	**11**	**11**	**9**	**13**	**7**	**10**	**12**
TOTAL INSECT SPECIMENS	**121**	**122**	**81**	**116**	**106**	**117**	**164**	**126**

TABLE 5-6
FALL MACROINVERTEBRATE SAMPLING
SUMMARY OF RESULTS FOR BRANCH BROOK AND NAUGATUCK RIVER
OCTOBER 18 AND 19, 1994
Envirite Facility
Thomaston, Connecticut

NON-INSECT TAXA	SAMPLING STATIONS							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
Annelida (segmented worms)								
Oligochaeta	1	1	1	1	1	0	1	2
Mollusca (clams and snails)								
Helisoma	1	0	1	1	1	0	1	1
Ferrissia	0	0	0	0	1	0	0	0
Pisidium	3	0	1	0	0	0	0	0
TOTAL NON-INSECT TAXA	3	1	3	2	3	0	2	2
TOTAL NON-INSECT SPECIMENS	5	1	3	2	3	0	2	3

TOTAL TAXA	14	12	14	11	16	7	12	14
TOTAL SPECIMENS	126	123	84	118	109	117	166	129

TABLE 5-7
CALCULATIONS OF HILSENHOFF BIOTIC INDEX
BRANCH BROOK FALL SAMPLING
OCTOBER 18 AND 19, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	Tolerance Value	Calculations							
		BB-R1	BB-A1	BB-A2	BB-A3	BB-R1	BB-A1	BB-A2	BB-A3
Coleoptera (beetles)									
Berosus	4	4	0	0	1	16			4
Dubiraphia	4	0	0	1	0			4	
Ectopria	4	1	0	0	0	4			
Optioservus	4	0	0	1	0			4	
Diptera (flies and midges)									
Chironomidae	7	3	1	1	4	21	7	7	28
Prosimulium	6	3	0	0	0	18			
Ephemeroptera (mayflies)									
Arthroplia	4	0	17	0	0		68		
Ephemerella	1	0	0	3	0			3	
Isonychia	2	5	0	0	14	10			28
Serratella	4	0	4	0	0		16		
Stenonema	4	4	4	7	3	16	16	28	12
Megaloptera (dobsonflies)									
Nigronia	0	3	4	12	7	0	0	0	0
Odonata (damselflies and dragonflies)									
Boyeria	3	0	0	2	0			6	
Plecoptera (stoneflies)									
Acroneuria	1	16	10	4	6	16	10	4	6
Trichoptera (caddisflies)									
Cheumatopsyche	4	32	28	23	30	128	112	92	120
Chimarra	3	7	4	1	3	21	12	3	9
Glossosoma	0	0	1	0	0		0		
Hydropsyche	4	43	48	26	48	172	192	104	192
Rhyacophila	0	0	1	0	0		0		
TOTAL INSECT SPECIMENS		**121**	**122**	**81**	**116**				
product sums						**422**	**433**	**255**	**399**
TOTAL INSECT TAXA						**11**	**11**	**11**	**9**
MODIFIED HILSENHOFF BIOTIC INDEX						**3.5**	**3.5**	**3.1**	**3.4**

TABLE 5-8
CALCULATIONS OF HILSENHOFF BIOTIC INDEX
NAUGATUCK RIVER FALL SAMPLING
OCTOBER 18 AND 19, 1994
Envirite Facility
Thomaston, Connecticut

INSECT TAXA	Tolerance Value	Calculations							
		NR-R1	NR-A1	NR-A2	NR-A3	NR-R1	NR-A1	NR-A2	NR-A3
Coleoptera (beetles)									
Berosus	4	4	0	0	1	16			4
Optioservus	4	1	0	2	1	4		8	4
Diptera (flies and midges)									
Chironomidae	7	5	0	7	23	35		49	161
Prosimulium	6	1	0	0	0	6			
Antocha	3	0	0	1	2			3	6
Ephemeroptera (mayflies)									
Cloeon	4	2	2	4	5	8	8	16	20
Pseudocloeon	4	1	0	0	2	4			8
Isonychia	2	1	22	4	12	2	44	8	24
Stenonema	4	3	15	3	5	12	60	12	20
Megaloptera (dobsonflies)									
Corydalus	1	1	1	1	0	1	1	1	
Odonata (damselflies and dragonflies)									
Ophiogomuphus	1	1	0	0	0	1			
Plecoptera (stoneflies)									
Taeniopteryx	2	0	0	0	2				4
Trichoptera (caddisflies)									
Cheumatopsyche	4	19	21	12	14	76	84	48	56
Hydropsyche	4	66	53	127	55	264	212	508	220
Leucotrichia	4	1	3	3	4	4	12	12	16
TOTAL INSECT SPECIMENS		**106**	**117**	**164**	**126**				
product sums						**433**	**421**	**665**	**543**
TOTAL INSECT TAXA						**13**	**7**	**10**	**12**
MODIFIED HILSENHOFF BIOTIC INDEX						**4.1**	**3.6**	**4.1**	**4.3**

TABLE 5-9
RESULTS OF EPA PROTOCOL III RAPID BIOASSESSMENT
FALL SAMPLING BRANCH BROOK AND NAUGATUCK RIVER
Envirite Facility
Thomaston, Connecticut

PROTOCOL III METRICS, PERCENT COMPARABILITY, AND CONDITION SCORE	STATION NUMBER							
	BB-R1	BB-A1	BB-A2	BB-A3	NR-R1	NR-A1	NR-A2	NR-A3
1. Taxa Richness	14.0	12.0	14.0	10.0	15.0	7.0	12.0	14.0
A/R(100)	na	86%	100%	71%	na	47%	80%	93%
SCORE	6	6	6	4	6	2	4	6
2. Hilsenhoff Biotic Index	3.5	3.5	3.1	3.4	4.1	3.6	4.1	4.3
R/A(100)	na	100%	113%	103%	na	114%	100%	95%
SCORE	6	6	6	6	6	6	6	6
3. Functional Feeding Groups								
Scrapers/Filterers	0.5	1.0	1.0	0.67	4.0	2.0	3.0	4.0
A/R(100)	na	200%	200%	134%	na	50%	75%	100%
SCORE	6	6	6	6	6	4	6	6
4. EPT/Chironomidae	31.3	117.0	64.0	26.0	18.6	na*	21.86	4.3
A/R(100)	na	374%	204%	83%	na	na*	118%	23%
SCORE	6	6	6	6	6	6	6	0
5. Percent Contribution (dom.taxon)**	75%	76%	49%	78%	80%	66%	86%	57%
SCORE	0	0	0	0	0	0	0	0
6. EPT Index	6.0	9.0	6.0	6.0	7.0	6.0	6.0	9.0
A/R(100)	na	150%	100%	100%	na	86%	86%	129%
SCORE	6	6	6	6	6	4	4	6
7. Community Loss Index***	na	0.23	0.31	0.00	na	0.67	0.13	0.20
SCORE	6	6	6	6	6	4	6	6
TOTAL SCORE	36	36	34	34	36	26	32	24
% Comp. to Ref. Score	na	100%	94%	94%	na	72%	89%	67%
BIOLOGICAL CONDITION CATEGORY	na	non-impaired	non-impaired	non-impaired	na	slightly impaired	non-impaired	slightly impaired

* no chironomids in sample NR-A1

** actual percent contribution evaluated, not percent comparability to reference station

*** values increase with increasing dissimilarity to reference station and decrease with similarity

TABLE 5-10
FISH SURVEY OF BRANCH BROOK AND NAUGATUCK RIVER
ROUND 1, JUNE 1994
Envirite Facility
Thomaston, Connecticut

FISH SPECIES	FISH SAMPLING STATIONS											
	BRANCH BROOK								NAUGATUCK RIVER					
	BBA1		BBA2		BBA3		BBR1		NRA-1		NRA-2		NRR-1	
Blue Gill *Lepomis macrochirus*	9	(0.14-0.23)	1	(0.17)	9	(0.15-0.25)			2	(0.15-0.24)	4	(0.3-0.5)		SSNN
Longnose Dace *Rhinichthys cataractae*	5	(0.18 - 0.20)	1	(0.19)	3	(0.20-0.21)	4	(0.21-0.29)						
Black Nose Dace *Rhinichthys atratulus*	14	(0.18-0.28)	7	(0.11-0.18)	6	(0.17-0.21)	26	(0.13-0.28)						
White Sucker *Catastomus commersoni*	12	(0.22-1.15)			9	(0.27-1.15)	2	(0.26-1.08)	4	(0.42-1.31)	8	(0.45-1.38)		
Fall Fish *Semotilus corporalis*	22	(0.14-0.62)			2	(0.34-0.37)	4	(0.20-0.42)	2	(0.33-0.31)	2	(0.75)		SSNN
Tessellated Darter *Etheostoma olmstedi*	1	(0.16)	1	(0.23)	1	(0.23)	2	(0.16-0.17)						
Golden Shiner *Notemigonus crysoleucas*	1	(0.23)	1	(0.38)										
Rock Bass *Ambloplites rupestris*	1	(0.55)							4	(0.53-0.58)	3	(0.3-0.64)	3	(0.63-0.64)
Smallmouth Bass *Micropterus dolomieui*									1	(0.40)	1	(0.78)		
American Eel *Anguilla rostata*											4	(1.2-3.0)	1	(1.5)
Brown Bullhead *Lepomis auritus*									1	(0.71)				
Redbreast Sunfish *Ictalurus nebolosos*									1	(0.55)				

1. 9(0.20-0.21)= Number of individuals caught; followed in parenthesis by the range of total lengths in feet.
2. BBA1 indicates Branch Brook, adjacent Station, with last digit indicating the Station number, in this case adjacent Station 1 (see Figure 5-1).
3. BBR1 indicates Branch Brook Upstream Reference Station (see Figure 5-1).
4. NRA1 indicates Naugatuch River and, adjacent Station, with last digit indicating the Station number, in this case adjacent Station 1.
5. NRR1 indicates Naugatuch River upstream Reference Station (see Figure 5-1).
6. Fish were captured on June 22 and 23, 1994, using a backpack electroshock unit, with one or two persons manning fine mesh dip nets.
7. SSNN - indicates that several individuals were seen within electric field but none were stunned sufficiently to be netted.

TABLE 5-11
FISH SURVEY OF BRANCH BROOK AND NAUGATUCK RIVER
ROUND 2, NOVEMBER 1994
Envirite Facility
Thomaston, Connecticut

FISH SPECIES	FISH SAMPLING STATIONS							
	BRANCH BROOK				NAUGATUCK RIVER			
	BBA1	BBA2	BBA3	BBR1	NRA-1	NRA-2	NRA-3	NRR-1
Blue Gill *Lepomis macrochirus*		1 (0.14)	2 (0.21-0.34)		4 (0.10-0.18)	16 (0.10-0.19)	3 (0.13-0.34)	6 (0.13-0.28)
Longnose Dace *Rhinichthys cataractae*	2 (0.30-0.32)	1 (0.38)		1 (0.24)			1 (0.23)	
Black Nose Dace *Rhinichthys atratulus*	28 (0.14-0.30)	1 (0.21)	12 (0.11-0.26)	27 (0.12-0.26)		7 (0.18-0.24)		6 (0.16-0.22)
White Sucker *Catastomus commersoni*	1 (2.2)	1 (0.45)	3 (0.40-0.44)			3 (0.28-0.31)	1 (0.25)	3 (0.28-0.38)
Fall Fish *Semotilus corporalis*		2 (0.39-0.46)	21 (0.18-0.38)	6 (0.15-0.40)	15 (0.16-0.28)	24 (0.15-0.26)	2 (0.25-0.26)	30 (0.17-0.28)
Tessellated Darter *Etheostoma olmstedi*	4 (0.21-0.28)	1 (0.16)		1 (0.12)	10 (0.17-0.26)	11 (0.18-0.30)	11 (0.18-0.26)	10 (0.16-0.27)
Golden Shiner *Notemigonus crysoleucas*			1 (0.48)					
Rock Bass *Ambloplites rupestris*			1 (0.40)		1 (0.12)		1 (0.13)	3 (0.11-0.34)
Smallmouth Bass *Micropterus dolomieui*					9 (0.17-0.30)	6 (0.12-0.26)	5 (0.20-0.28)	7 (0.17-0.51)
Largemouth Bass *Micropterus Salmoides*		1 (0.20)	1 (0.20)					1 (0.18)
Pumpkinseed *Lepomis gibbosos*			4 (0.33-0.48)					
Brown Trout *Salmo Trutta*				1 (1.11)				
Red Fin Pickeral *Esox americanus*					1 (0.27)			
Cut lips Minnon *Exoglossum Maxillingua*						1 (0.19)		

1. 9(0.20-0.21)= Number of individuals caught; followed in parenthesis by the range of total lengths in feet.
2. BBA1 indicates Branch Brook, adjacent Station, with last digit indicating the Station number, in this case adjacent Station 1 (see Figure 5-1).
3. BBR1 indicates Branch Brook Upstream Reference Station (see Figure 5-1).
4. NRA1 indicates Naugatuch River and, adjacent Station, with last digit indicating the Station number, in this case adjacent Station 1.
5. NRR1 indicates Naugatuch River upstream Reference Station (see Figure 5-1).
6. Fish were captured on November 2 and 3, 1994, using a backpack electroshock unit, with one or two persons manning Fire mesh dip nets.

TABLE 6-1
SOIL GAS SURVEY SUMMARY
RESULTS IN ug/L (mg/m3)

Location	Depth (in)	Date	PCE	TCE	11,DCE	t-1,2-DCE	1,1,1-TCA	1,2-DCA	UNKNOWNS	TOTAL VOC	OVM 580B
-A,0	14	4/27/94	0.059	ND	ND	ND	ND	ND	0.06	0.119	ND
-A,0 (DUP)	14	4/27/94	0.043	ND	ND	ND	0.06	ND	ND	0.103	ND
-A,1	42	5/2/94	0.34	ND	ND	ND	ND	ND	ND	0.34	0.5
-A,3	42	5/3/94	0.28	ND	ND	ND	ND	ND	ND	0.28	ND
A,-1	13	4/27/94	ND	ND	ND	ND	ND	ND	ND	0	ND
A,0	10	4/27/94	0.06	ND	ND	ND	ND	ND	ND	0.06	ND
A,1	11	4/20/94	ND	ND	ND	ND	ND	ND	0.2	0.2	ND
A,1	42	4/28/94	10	ND	0.8	ND	ND	ND	0.4	11.2	0.5
A,3	11	4/20/94	ND	ND	ND	ND	ND	ND	ND	0	ND
A,3	42	5/2/94	10	ND	ND	ND	ND	ND	1.3	11.3	2
A,5	12	4/27/94	0.14	ND	ND	ND	0.03	ND	0.14	0.31	ND
A,5	42	4/27/94	ND	ND	ND	ND	ND	ND	ND	0	ND
B,0	10	4/27/94	ND	ND	ND	ND	ND	ND	ND	0	ND
B,0.5	42	5/3/94	>4	ND	ND	ND	ND	ND	2.8	>6.8	0.6
B,0.5 (DUP)	42	5/3/94	4.7	ND	ND	ND	ND	ND	3.5	8.2	0.6
B,1	10	4/27/94	0.1	ND	ND	ND	ND	ND	ND	0.1	ND
B,1	42	5/2/94	3.1	ND	ND	ND	ND	ND	0.6	3.7	ND
B,3	11	4/20/94	0.12	ND	ND	ND	ND	ND	ND	0.12	ND
B,3	42	5/2/94	5.4	ND	ND	ND	ND	ND	3	8.4	1
B,5	8	4/20/94	ND	ND	ND	ND	ND	ND	ND	0	ND
B,5	42	5/2/94	0.33	ND	ND	ND	ND	ND	0.3	0.63	ND
B,7	10	4/27/94	0.064	ND	ND	ND	ND	ND	ND	0.064	ND
B,7	42	5/2/94	0.83	0.13	ND	ND	ND	ND	0.2	1.16	ND
C',12	42	5/13/94	0.51	ND	ND	ND	0.09	ND	0.2	0.8	0.6
C',9	24	5/13/94	0.43	ND	4	ND	ND	ND	ND	4.43	ND
C,0	8	4/27/94	0.056	ND	ND	ND	ND	ND	ND	0.056	ND
C,1	13	4/27/94	0.42	ND	ND	ND	0.04	ND	ND	0.46	ND
C,1	36	4/28/94	0.84	ND	ND	ND	ND	ND	ND	0.84	ND
C,3	12	4/27/94	0.57	ND	ND	ND	ND	ND	ND	0.57	ND
C,3	42	4/27/94	0.63	ND	ND	ND	ND	ND	0.1	0.73	ND
C,5	42	4/28/94	0.54	ND	ND	ND	ND	ND	ND	0.54	0.5
C,7	14	4/27/94	0.073	ND	ND	ND	ND	ND	ND	0.073	ND
C,7	42	5/2/94	12	ND	ND	ND	ND	ND	4.9	16.9	ND
C,9	42	5/3/94	0.77	ND	ND	ND	0.1	ND	10	10.87	0.6
D',10	42	5/12/94	>6.6	4.1	ND	ND	0.16	0.5	0.9	>12.3	ND
D',10 (DUP)	42	5/12/94	6.4	3.6	ND	ND	0.13	0.5	0.3	10.93	0.6
D',9	42	5/11/94	6.4	3	ND	ND	0.2	ND	1	10.6	ND
D,0	12	4/27/94	0.059	ND	ND	ND	0.03	ND	ND	0.089	ND
D,0	42	4/28/94	0.61	ND	ND	ND	0.4	ND	ND	1.01	0.5
D,1	10	4/20/94	0.056	ND	ND	ND	ND	ND	ND	0.056	ND
D,1	36	4/28/94	0.12	ND	ND	ND	ND	ND	ND	0.12	ND
D,10	36	5/13/94	>4	2.2	ND	ND	0.2	ND	0.8	>7.2	0.6
D,10 (DUP)	36	5/13/94	9.5	1.7	ND	ND	0.1	ND	ND	11.3	0.6
D,12	42	5/13/94	0.37	ND	ND	ND	ND	ND	0.4	0.77	0.6
D,3	8	4/20/94	0.5	ND	ND	ND	ND	ND	ND	0.5	0.3
D,3 (DUP)	8	4/20/94	0.6	ND	ND	ND	ND	ND	ND	0.6	0.3
D,3	42	4/28/94	11	ND	0.8	ND	ND	ND	ND	11.8	1
D,5	16	4/21/94	10	ND	ND	ND	ND	ND	ND	10	ND
D,5	42	5/2/94	18	0.8	ND	ND	ND	ND	1.7	20.5	2
D,7	17	4/27/94	0.16	ND	ND	ND	ND	ND	ND	0.16	ND
D,7	42	4/28/94	1.3	ND	0.05	ND	ND	ND	0.1	1.45	0.5
D,9	42	5/3/94	8.3	2.5	ND	ND	ND	ND	2.4	13.2	ND
E',10	24	5/11/94	1.1	0.5	ND	ND	ND	ND	0.2	1.8	ND
E',11	36	5/13/94	2.2	0.8	ND	ND	ND	ND	0.4	3.4	ND
E',9	42	5/11/94	>4	2	ND	ND	0.1	ND	0.7	>6.8	ND
E',9 (DUP)	42	5/11/94	4.1	2	ND	ND	0.1	ND	0.7	6.9	0.6
E,1	18	4/20/94	0.045	ND	ND	ND	ND	ND	ND	0.045	ND
E,1	42	4/28/94	0.029	ND	ND	ND	ND	ND	ND	0.029	ND
E,3	13	4/20/94	0.55	ND	ND	ND	ND	ND	0.2	0.75	1
E,3	42	5/2/94	10	ND	ND	ND	ND	ND	ND	10	0.5

TABLE 6-1
SOIL GAS SURVEY SUMMARY
RESULTS IN ug/L (mg/m3)

Location	Depth (in)	Date	PCE	TCE	11,DCE	t-1,2-DCE	1,1,1-TCA	1,2-DCA	UNKNOWNS	TOTAL VOC	OVM 580B
E.3 (DUP)	13	4/20/94	0.22	ND	ND	ND	ND	ND	0.2	0.42	0.6
E.5	13	4/21/94	0.15	ND	ND	ND	ND	ND	ND	0.15	ND
E.5	30	4/28/94	1.8	ND	ND	ND	ND	ND	ND	1.8	0.5
E.7	11	4/27/94	0.079	ND	ND	ND	ND	ND	ND	0.079	ND
E.7	42	5/2/94	0.67	ND	ND	ND	ND	ND	ND	0.67	ND
E.8	42	5/4/94	20	7.2	ND	ND	ND	ND	1.7	28.9	ND
E.9	42	5/5/94	2.3	2	ND	ND	ND	ND	ND	4.3	ND
F.7	42	5/4/94	5.8	1.5	ND	ND	0.2	ND	1.8	9.3	ND
F.8	42	5/4/94	0.93	0.4	ND	ND	ND	ND	ND	1.33	ND
F.9	42	5/4/94	1.4	0.7	ND	ND	ND	ND	0.4	2.5	ND
G.1	10	4/27/94	0.048	ND	ND	ND	ND	ND	ND	0.048	ND
G.1	42	4/28/94	0.24	ND	ND	ND	ND	ND	ND	0.24	0.5
G.10	42	5/3/94	0.87	0.2	ND	ND	ND	ND	0.3	1.37	ND
G.3	6	4/20/94	0.055	ND	ND	ND	ND	ND	0.3	0.355	ND
G.3	42	5/2/94	13.7	ND	ND	ND	ND	ND	0.5	14.2	0.3
G.5	16	4/21/94	0.15	ND	ND	ND	ND	ND	ND	0.15	ND
G.5	42	5/2/94	22	ND	ND	ND	ND	ND	ND	22	3
G.5 (DUP)	16	4/21/94	0.076	ND	ND	ND	ND	ND	ND	0.076	ND
G.7	12	4/27/94	0.086	ND	ND	ND	ND	ND	ND	0.086	ND
G.7	42	5/2/94	ND	ND	ND	ND	ND	ND	ND	0	ND
G.8	42	5/3/94	6.1	5.6	ND	ND	ND	ND	2	13.7	0.6
G.9	42	5/3/94	0.086	ND	ND	ND	ND	ND	ND	0.086	2.8
H.10	42	5/3/94	0.22	ND	ND	ND	ND	ND	ND	0.22	ND
H.11	42	5/3/94	0.097	ND	ND	ND	ND	ND	ND	0.097	0.6
H.7	42	5/4/94	50	ND	ND	ND	ND	ND	2	52	1.5
H.8	42	5/3/94	1.9	0.4	ND	ND	ND	ND	0.3	2.6	ND
H.9	42	5/3/94	0.14	ND	ND	ND	ND	ND	ND	0.14	ND
I.1	15	4/27/94	0.05	ND	ND	ND	ND	ND	ND	0.05	ND
I.1	24	4/28/94	0.029	ND	ND	ND	0.04	ND	ND	0.069	ND
I.10	42	5/4/94	0.037	ND	ND	ND	ND	ND	0.1	0.137	ND
I.11	42	5/4/94	3.9	ND	ND	ND	ND	ND	1.3	5.2	ND
I.12	42	5/11/94	0.094	ND	ND	ND	ND	ND	ND	0.094	ND
I.3	15	4/27/94	0.27	ND	ND	ND	0.03	ND	ND	0.3	ND
I.3	42	4/28/94	0.22	ND	ND	ND	ND	ND	ND	0.22	0.5
I.5	12	4/27/94	0.048	ND	ND	ND	ND	ND	ND	0.048	ND
I.5	42	4/28/94	0.056	ND	ND	ND	0.03	ND	ND	0.086	ND
I.7	12	4/20/94	1.2	ND	ND	ND	ND	ND	ND	1.2	0.3
I.7	10	4/27/94	0.4	ND	ND	ND	ND	ND	ND	0.4	ND
I.7	42	5/2/94	24	1.4	ND	ND	0.23	ND	1.4	27.03	44
I.7 (DUP)	42	5/2/94	20	ND	ND	ND	ND	ND	ND	20	42
I.8	30	5/4/94	0.1	ND	ND	ND	ND	ND	0.1	0.2	ND
I.9	42	5/4/94	0.81	ND	ND	ND	ND	ND	ND	0.81	ND
J.10	42	5/4/94	0.079	ND	ND	ND	ND	ND	0.1	0.179	ND
J.11	42	5/4/94	0.23	ND	ND	ND	ND	ND	0.1	0.33	ND
J.12	42	5/11/94	1	0.3	ND	ND	ND	ND	ND	1.3	ND
J.3	42	5/6/94	1.2	ND	1.1	ND	ND	ND	ND	2.3	ND
J.4	42	5/6/94	3.9	0.6	0.3	ND	0.1	ND	ND	4.9	ND
J.5	42	5/6/94	0.17	ND	0.1	ND	ND	ND	ND	0.27	ND
J.6	42	5/5/94	0.42	ND	ND	ND	0.1	ND	0.4	0.92	ND
J.7	42	5/5/94	0.25	0.16	ND	ND	ND	ND	0.1	0.51	ND
J.8	42	5/4/94	>20	ND	ND	ND	ND	ND	1.5	>21.5	1.1
J.8 (DUP)	42	5/4/94	25	ND	ND	ND	ND	ND	3	28	1.1
J.9	34	5/4/94	0.36	ND	ND	ND	ND	ND	0.1	0.46	ND
K.1	13	4/20/94	0.025	ND	ND	ND	ND	ND	0.2	0.225	ND
K.10	42	5/4/94	0.043	ND	ND	ND	ND	ND	ND	0.043	ND
K.11	42	5/4/94	0.14	ND	ND	ND	ND	ND	0.2	0.34	ND
K.12	42	5/11/94	0.28	0.2	ND	ND	ND	ND	0.1	0.58	ND
K.3	17	4/20/94	0.034	ND	ND	ND	ND	ND	0.2	0.234	ND
K.4	42	5/6/94	0.48	ND	0.6	ND	0.07	ND	ND	1.15	ND
K.5	15	4/27/94	0.21	ND	ND	ND	ND	ND	ND	0.21	ND

TABLE 6-1
SOIL GAS SURVEY SUMMARY
RESULTS IN ug/L (mg/m3)

Location	Depth (in)	Date	PCE	TCE	1,1,DCE	t-1,2-DCE	1,1,1-TCA	1,2-DCA	UNKNOWNS	TOTAL VOC	OVM 580B
K,5	15	4/27/94	0.2	ND	ND	ND	0.02	ND	ND	0.22	ND
K,5	42	5/6/94	0.81	ND	ND	ND	ND	ND	ND	0.81	3.3
K,6	42	5/5/94	2.7	ND	ND	ND	0.1	ND	0.46	3.26	0.6
K,7	10	4/27/94	0.14	ND	ND	ND	ND	ND	ND	0.14	0.8
K,7	42	5/2/94	4.5	ND	ND	ND	ND	ND	ND	4.5	4.8
K,8	42	5/4/94	1.1	ND	ND	ND	ND	ND	1	2.1	10
K,9	42	5/4/94	0.16	ND	ND	ND	ND	ND	ND	0.16	ND
L,10	42	5/5/94	0.1	ND	ND	ND	ND	ND	0.3	0.4	ND
L,5	42	5/6/94	0.047	ND	ND	ND	ND	ND	ND	0.047	ND
L,6	42	5/6/94	2.5	ND	ND	ND	ND	ND	ND	2.5	ND
L,7	42	5/5/94	0.24	ND	>10	ND	0.06	ND	0.4	>10	ND
L,7 (DUP)	42	5/5/94	0.28	ND	3.5	ND	ND	ND	0.26	4.04	ND
L,8	42	5/5/94	0.12	ND	1	ND	0.07	ND	0.2	1.39	ND
L,9	42	5/5/94	0.24	ND	ND	ND	0.07	ND	0.9	1.21	ND
QA/QC Samples (Control Points, Ambient Air, and Blanks)											
D,3	8	4/20/94	0.5	ND	ND	ND	ND	ND	ND	0.5	0.3
D,3	8	4/28/94	0.38	ND	ND	ND	ND	ND	ND	0.38	ND
D,3	8	5/2/94	0.4	ND	ND	ND	ND	ND	ND	0.4	ND
D,3	8	5/3/94	1.4	ND	ND	ND	ND	ND	ND	1.4	ND
D,3 (DUP)	8	4/20/94	0.6	ND	ND	ND	ND	ND	ND	0.6	0.3
D,3	42	4/27/94	10	0.18	ND	ND	ND	ND	0.3	10.48	0.5
D,3	42	4/28/94	>8.4	ND	ND	ND	ND	ND	ND	>8.4	0.5
D,3	42	4/28/94	11	ND	0.8	ND	ND	ND	ND	11.8	1
D,3	42	4/28/94	12	ND	0.2	ND	ND	ND	ND	12.2	1
G,10	42	5/3/94	0.87	0.2	ND	ND	ND	ND	0.3	1.37	ND
G,10	42	5/4/94	0.59	ND	ND	ND	ND	ND	0.2	0.79	ND
G,10	42	5/5/94	0.75	0.24	ND	ND	ND	ND	0.33	1.32	ND
G,10	42	5/6/94	1	0.3	ND	ND	0.04	ND	0.3	1.64	ND
G,10	42	5/12/94	1.1	0.3	ND	ND	ND	ND	0.4	1.8	ND
G,10	42	5/13/94	0.81	ND	ND	ND	ND	ND	0.2	1.01	ND
Ambient	NA	4/20/94	ND	ND	ND	ND	ND	ND	ND	0	NA
Ambient	NA	4/21/94	0.037	ND	ND	ND	ND	ND	ND	0.037	NA
Ambient	NA	4/27/94	ND	ND	ND	ND	ND	ND	ND	0	NA
Ambient	NA	4/28/94	ND	ND	ND	ND	0.04	ND	ND	0.04	ND
Ambient	NA	4/28/94	0.021	ND	ND	ND	ND	ND	ND	0.021	NA
Ambient	NA	5/2/94	ND	ND	ND	ND	ND	ND	ND	0	NA
Ambient	NA	5/3/94	0.22	0.2	ND	ND	ND	ND	ND	0.42	NA
Ambient	NA	5/4/94	0.13	ND	ND	ND	ND	ND	0.1	0.23	NA
Ambient	NA	5/5/94	0.052	ND	ND	ND	ND	ND	ND	0.052	NA
Ambient	NA	5/6/94	0.095	ND	ND	ND	ND	ND	ND	0.095	NA
Ambient	NA	5/11/94	0.043	ND	ND	ND	ND	ND	ND	0.043	NA
Ambient	NA	5/12/94	0.14	ND	ND	ND	ND	ND	ND	0.14	ND
Ambient	NA	5/13/94	ND	ND	ND	ND	ND	ND	ND	0	NA
Eq. Blk.	NA	4/20/94	0.033	ND	ND	ND	ND	ND	0.2	0.233	ND
Eq. Blk.	NA	4/21/94	ND	ND	ND	ND	ND	ND	1	1	NA
Eq. Blk.	NA	4/27/94	0.044	ND	ND	ND	0.05	ND	ND	0.094	NA
Eq. Blk.	NA	5/2/94	ND	ND	ND	ND	ND	ND	ND	0	NA
Eq. Blk.	NA	5/3/94	0.1	ND	ND	ND	ND	ND	ND	0.1	NA
Eq. Blk.	NA	5/4/94	0.18	ND	ND	ND	ND	ND	ND	0.18	NA
Eq. Blk.	NA	5/5/94	0.076	ND	ND	ND	ND	ND	0.05	0.126	NA
Eq. Blk.	NA	5/6/94	0.088	ND	ND	ND	ND	ND	ND	0.088	NA
Eq. Blk.	NA	5/13/94	0.037	ND	ND	ND	ND	ND	ND	0.037	NA

NOTES:

1. Results based on a soil gas survey conducted between April 20, 1994 and May 13, 1994 by GZA.
2. Two gas chromatographs were used for this study; a Perkin-Elmer Sigma 2000 equipped with an electron capture detector and capillary column and a Photovac 10S50 equipped with a photoionization detector and capillary column.
3. Compound identification based on retention time as compared to a standard. Concentration calculated based on peak height and response factor of a standard prepared in air. Concentrations of unknowns were estimated based on average response factors of other VOCs analyzed.
4. Control point and ambient air samples were analyzed on a daily basis.

TABLE 6-2
APPENDIX IX DERIVED PRE-ENVIRITE WASTE MATERIAL PARAMETER LIST
Envirite Facility
Thomaston, Connecticut

Volatiles		
Methylene Chloride	Trichloroethene	Toluene
Acetone	Benzene	Ethyl Benzene
Cis-1,2-Dichloroethene	4-Methyl-2-Pentanone	Styrene
2-Butanone	Tetrachloroethene	m/p/o-Xylene (Total)
Semi-Volatiles		
Anthracene	Dibenzofuran	Fluorene
Benzo(b)fluoranthene	Di-n-butyl phthalate	2-Methylnaphthalene
Benzo(k)fluoranthene	Diethylphthalate	Naphthalene
Benzo(g,h,i)fluoranthene	Di-n-octylphthalate	Phenanthrene
Bis(2-ethylhexyl)phthalate	Fluoranthene	Pyrene
Pesticides/PCBs		
Alpha-BHC	Heptachlor epoxide	Endrin Aldehyde
Delta-BHC	4,4-DDE	Alpha-Chlordane
Gamma-BHC (Lindone)	Endosulfan 11	Tetrachloro-m-xylene
Aldrin	4,4-DDT	Aroclor-1254
Herbicides		
2,4,5-T	MCPA	
Dichloroprop	MCPP	
Metals		
Silver	Cobalt	Nickel
Arsenic	Chromium	Lead
Barium	Copper	Vanadium
Cadmium	Mercury	Zinc
Inorganics		
Sulfide (Total)		
Miscellaneous		
Dioxins		
Furans		

TABLE 6-3
PRE-ENVIRITE WASTE MATERIAL THICKNESS AND DEPTH[1]
Envirite Facility
Thomaston, Connecticut

Boring	*Depth Range* (fbg)	*Elevation Range* (MSL)	*Thickness* (feet)
W-03	24-26	324.28 - 322.28	2.0
W-09	23.5-29.5	324.28 - 318.28	6.0
W-11	25.5-28	322.48 - 319.98	2.5
W-15	24.6-24.9	324.78 - 324.48	0.3
W-19	15-23	331.08 - 323.08	8.0
W-24	9-17.5	330.58 - 322.08	8.5
W-25	9-12	330.15 - 327.15	3.0
W-27	11-15	328.05 - 324.05	4.0
W-30	11.5-15	327.75 - 324.25	3.5
W-32	11-13	328.55 - 326.55	2.0
R-12	11-13	328.95 - 326.95	2.0

Notes:

fbg = feet below grade
ft = feet
MSL = Mean Sea Level

1. Waste material thickness and depth measurements are based upon split spoon samples collected during the waste pile investigation and field interpretation of drilling conditions.
2. Waste material is assumed to be present in boring W-10 although samples could not be recovered. The drilling augers were observed to be oily when removed from W-10. Waste material was encountered in W-11 drilled adjacent to W-10.

TABLE 7-1
LANDFILL TREATMENT RESIDUE ANALYTICAL SELECTION CRITERIA[1]
Envirite Facility
Thomaston, Connecticut

Samples Chosen by Depth	
Sample	**Depth (feet)**
L-01C	10-12
L-01D	15-17
L-02E	20-22
L-02F	25-27

Samples Chosen by Highest PID Reading			
Sample	**PID Reading (ppm)**	**Sample**	**PID Reading (ppm)**
L-01D	205	L-08C	5
L-02F	60	L-09D	22
L-05F	400	L-09E	25
L-07B	250	L-10B	8
L-08B	9		

Samples Chosen Randomly	
L-01B	L-06A
L-01C	L-06C
L-02C	L-06F
L-02D	L-06G
L-03C	L-07B
L-03D	L-07C
L-03E	L-07D
L-04B	L-08D
L-04D	L-08E
L-04F	L-09B
L-04G	L-09C
L-05B	L-10C
L-05D	L-10D
L-05E	W-03B
L-05F	

1. Many samples fulfill several criteria.

TABLE 7-2
PRELIMINARY LANDFILL TREATMENT RESIDUE PARAMETER LIST
Envirite Facility
Thomaston, Connecticut

Volatile Organics by EPA Method 8240	Lead
Barium	Nickel
Cadmium	Silver
Chromium	Zinc
Copper	Total Cyanide

TABLE 7-3
APPENDIX IX DERIVED LANDFILL TREATMENT RESIDUE PARAMETER LIST
Envirite Facility
Thomaston, Connecticut

Volatiles		
Methylene Chloride	1,1,1-Trichloroethane	Chlorobenzene
Acetone	Trichloroethene	Ethyl Benzene
Carbon Disulfide	Benzene	Styrene
Chloroform	Tetrachloroethene	m/p/o-Xylene (Total)
2-Butanone	Toluene	Acrolein
Semi-Volatiles		
Acenaphthene	Di-n-butylphthalate	Naphthalene
Anthracene	Di-n-octylphthalate	N-Nitrosodiphenylamine
Bis(2-ethylhexyl)phthalate	Fluoranthene	Phenanthrene
Butyl benzyl phthalate	Fluorene	Pyrene
Diethylphthalate	2-Methyl naphthalene	
Pesticides/PCBs		
Alpha-BHC	4,4-DDE	Gamma-Chlordane
Beta-BHC	Endosulfan 11	Tetrachloro-m-xylene
Heptachlor	4,4-DDD	Decachlorobiphenyl
Aldrin	Endosulfan Sulfate	Aroclor-1242
Heptachlor epoxide	Methoxychor	
Dieldrin	Endrin Aldehyde	
Herbicides		
2,4-D	2,4,5-T	MCPA
2,4-DB	Dicamba	MCPP
2,4,5-TP Silvex	Dichloroprop	
Metals		
Silver	Chromium	Tin
Arsenic	Copper	Thallium
Barium	Mercury	Vanadium
Beryllium	Nickel	Zinc
Cadmium	Lead	
Cobalt	Antimony	
Inorganics		
Total Cyanide		
Sulfide (Total)		

TABLE 7-4
ENVIRITE LANDFILL TREATMENT RESIDUE THICKNESS
Envirite Facility
Thomaston, Connecticut

	Ground Surface Elevation (MSL)	Top of Residue Elevation (MSL)	Base of Residue Elevation (MSL)
L-01	347.91	344.91	331.31
L-02	357.05	352.05	327.05
L-03	353.25	343.25	332.45
L-04	360.75	355.75	329.15
L-05	357.05	355.85	327.05
L-06	361.35	361.05	331.35
L-07	361.25	356.25	345.05
L-08	358.15	353.15	338.15
L-09	351.55	346.55	330.55
L-10	352.15	347.15	332.15

Notes: MSL = Mean Sea Level; Top of Residue and Base of Residue elevations are based upon split spoon samples collected every five feet during the installation of the landfill borings.

TABLE 8-1
WASTEWATER SPILL AREA PARAMETER LIST
Envirite Facility
Thomaston, Connecticut

Aluminum	Mercury
Antimony	Nickel
Barium	Potassium
Cadmium	Silver
Calcium	Sodium
Total Chromium	Tin
Hexavalent Chromium	Titanium
Cobalt	Zinc
Copper	Ammonia
Iron	Nitrite as N
Lead	Nitrate as N
Magnesium	pH
Manganese	Sulfide (Total)

TABLE 9-1
PRE-ENVIRITE WASTE MATERIAL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenol	3	2	5.7	73.4	170.	HMH941121WPW25C
Bis(2-chloroethyl)ether	3	0	ND	ND	ND	ND
2-Chlorophenol	3	0	ND	ND	ND	ND
1,3-Dichlorobenzene	3	0	ND	ND	ND	ND
1,4-Dichlorobenzene	3	0	ND	ND	ND	ND
1,2-Dichlorobenzene	3	0	ND	ND	ND	ND
2-Methylphenol	3	0	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	3	0	ND	ND	ND	ND
4-Methylphenol	3	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	3	0	ND	ND	ND	ND
Hexachloroethane	3	0	ND	ND	ND	ND
Nitrobenzene	3	0	ND	ND	ND	ND
Isophorone	3	2	1.9	38.1333	68.	HMH941121WPW25C
2-Nitrophenol	3	0	ND	ND	ND	ND
2,4-Dimethylphenol	3	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	3	0	ND	ND	ND	ND
2,4-Dichlorophenol	3	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	3	0	ND	ND	ND	ND
Naphthalene	3	3	6.9	61.6333	160.	HMH941121WPW25C
4-Chloroaniline	3	0	ND	ND	ND	ND
Hexachlorobutadiene	3	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	3	0	ND	ND	ND	ND
2-Methylnaphthalene	3	2	0.93	41.81	4.5	HMH941109WPW19D
Hexachlorocyclopentadiene	3	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	3	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	3	0	ND	ND	ND	ND
2-Chloronaphthalene	3	0	ND	ND	ND	ND
2-Nitroaniline	3	0	ND	ND	ND	ND
Dimethylphthalate	3	0	ND	ND	ND	ND
Acenaphthylene	3	0	ND	ND	ND	ND
2,6-Dinitrotoluene	3	0	ND	ND	ND	ND
3-Nitroaniline	3	0	ND	ND	ND	ND
Acenaphthene	3	0	ND	ND	ND	ND
2,4-Dinitrophenol	3	0	ND	ND	ND	ND
4-Nitrophenol	3	0	ND	ND	ND	ND
Dibenzofuran	3	0	ND	ND	ND	ND
2,4-Dinitrotoluene	3	0	ND	ND	ND	ND
Diethylphthalate	3	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	3	0	ND	ND	ND	ND
Fluorene	3	0	ND	ND	ND	ND
4-Nitroaniline	3	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	3	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	3	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	3	0	ND	ND	ND	ND
Hexachlorobenzene	3	0	ND	ND	ND	ND
Pentachlorophenol	3	0	ND	ND	ND	ND

TABLE 9-1
PRE-ENVIRITE WASTE MATERIAL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenanthrene	3	1	0.93	55.1433	0.93	CW941207WPW30E
Anthracene	3	0	ND	ND	ND	ND
Carbazole	3	0	ND	ND	ND	ND
Di-n-butylphthalate	3	3	74.	1131.3333	3100.	HMH941121WPW25C
Fluoranthene	3	1	1.2	55.2333	1.2	CW941207WPW30E
Pyrene	3	1	1.2	55.2333	1.2	CW941207WPW30E
Butylbenzylphthalate	3	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	3	0	ND	ND	ND	ND
Benzo(a)anthracene	3	0	ND	ND	ND	ND
Chrysene	3	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	3	3	190.	2433.3333	6500.	HMH941121WPW25C
Di-n-octylphthalate	3	2	1.	42.6667	7.	HMH941109WPW19D
Benzo(b)fluoranthene	3	1	0.59	55.03	0.59	CW941207WPW30E
Benzo(k)fluoranthene	3	1	0.82	55.1067	0.82	CW941207WPW30E
Benzo(a)pyrene	3	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	3	0	ND	ND	ND	ND
Dibenzo(a,h)anthracene	3	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	3	0	ND	ND	ND	ND
Pyridine	0	0	NA	ND	NA	NA
Antimony	5	1	96.3	22.85	96.3	HMH941121WPW25C
Arsenic	5	5	1.2	2.2	2.8	HMH941121WPW25C
Barium	5	5	32.7	423.56	1710.	HMH941121WPW25C
Beryllium	5	3	0.28	0.369	0.87	HMH941026WPW09G
Cadmium	5	4	0.56	86.395	394.	HMH941121WPW25C
Chromium	5	5	15.5	310.	1240.	HMH941121WPW25C
Cobalt	5	5	7.6	12.68	24.8	HMH941121WPW25C
Copper	5	5	26.5	946.7	3340.	HMH941121WPW25C
Lead	5	5	12.7	1300.12	5900.	HMH941121WPW25C
Mercury	5	2	0.3	0.5694	2.4	HMH941121WPW25C
Nickel	5	5	17.	34.32	58.8	HMH941121WPW25C
Selenium	5	2	6.3	10.828	47.5	HMH941121WPW25C
Silver	5	4	0.94	9.94	36.5	HMH941109WPW19D
Thallium	5	2	0.26	0.238	0.59	HMH941121WPW25C
Tin	5	2	3.8	8.77	35.4	HMH941121WPW25C
Vanadium	5	5	10.7	22.	28.3	HMH941026WPW09G
Zinc	5	5	50.1	1339.4	5570.	HMH941121WPW25C
Alpha-BHC	3	0	ND	ND	ND	ND
Beta-BHC	3	0	ND	ND	ND	ND
Delta-BHC	3	0	ND	ND	ND	ND
Chlordane	0	0	NA	ND	NA	NA
Toxaphene	3	0	ND	ND	ND	ND
Endrin	3	0	ND	ND	ND	ND
Heptachlor	3	0	ND	ND	ND	ND
Heptachlor epoxide	3	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Aldrin	3	0	ND	ND	ND	ND

TABLE 9-1
PRE-ENVIRITE WASTE MATERIAL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endosulfan I	3	0	ND	ND	ND	ND
Dieldrin	3	0	ND	ND	ND	ND
4,4'-DDE	3	0	ND	ND	ND	ND
Endosulfan II	3	0	ND	ND	ND	ND
4,4'-DDD	3	0	ND	ND	ND	ND
Endosulfan sulfate	3	0	ND	ND	ND	ND
4,4-DDT	3	0	ND	ND	ND	ND
Endrin ketone	3	0	ND	ND	ND	ND
Endrin aldehyde	3	0	ND	ND	ND	ND
alpha-Chlordane	3	0	ND	ND	ND	ND
gamma-Chlordane	3	0	ND	ND	ND	ND
Aroclor 1016	2	0	ND	ND	ND	ND
Aroclor 1221	2	0	ND	ND	ND	ND
Aroclor 1232	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1248	2	2	1.2	2.	4.	HMH941109WPW19D
Aroclor 1254	3	3	9.	16.	26.	HMH941121WPW25C
Aroclor 1260	2	1	5.9	0.0178	5.9	CW941207WPW30E
Vinyl acetate	1	0	ND	ND	ND	ND
Chloromethane	5	0	ND	ND	ND	ND
Bromomethane	5	0	ND	ND	ND	ND
Vinyl chloride	5	0	ND	ND	ND	ND
Chloroethane	5	0	ND	ND	ND	ND
Methylene chloride	5	2	0.003	26.6606	85.	HMH941121WPW25C
Acetone	5	3	0.021	127.6782	590.	HMH941121WPW25C
Carbon disulfide	5	0	ND	ND	ND	ND
1,1-Dichloroethene	5	1	0.07	99.5451	0.07	HMH941109WPW19D
1,1-Dichloroethane	5	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	5	3	0.002	19.4604	70.	HMH941121WPW25C
Cis-1,2-Dichloroethene	5	3	0.002	19.4604	70.	HMH941121WPW25C
Chloroform	5	3	0.002	28.1464	93.	HMH941121WPW25C
1,2-Dichloroethane	5	0	ND	ND	ND	ND
2-Butanone	5	3	0.002	429.6564	2100.	HMH941121WPW25C
1,1,1-Trichloroethane	5	0	ND	ND	ND	ND
Carbon tetrachloride	5	0	ND	ND	ND	ND
Bromodichloromethane	5	0	ND	ND	ND	ND
1,2-Dichloropropane	5	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	5	0	ND	ND	ND	ND
Trichloroethene	5	3	0.2	710.1711	3300.	HMH941121WPW25C
Dibromochloromethane	5	0	ND	ND	ND	ND
1,1,2-Trichloroethane	5	0	ND	ND	ND	ND
Benzene	5	3	0.002	15.5604	30.	HMH941121WPW25C
Cis-1,3-Dichloropropene	5	0	ND	ND	ND	ND
Bromoform	5	0	ND	ND	ND	ND
2-Hexanone	5	0	ND	ND	ND	ND
4-Methyl-2-pentanone	5	2	540.	1688.2611	7900.	HMH941121WPW25C
Tetrachloroethene	5	4	0.015	708.153	3100.	HMH941121WPW25C

TABLE 9-1
PRE-ENVIRITE WASTE MATERIAL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,1,2,2-Tetrachloroethane	5	0	ND	ND	ND	ND
Toluene	5	5	0.005	3400.177	15000.	HMH941121WPW25C
Chlorobenzene	5	1	0.15	99.5611	0.15	HMH941109WPW19D
Ethylbenzene	5	4	0.047	761.8594	3100.	HMH941121WPW25C
Styrene	5	2	620.	584.2611	2300.	HMH941121WPW25C
Xylenes (total)	5	5	0.018	3725.4496	16000.	HMH941121WPW25C
MCPA	1	0	ND	ND	ND	ND
MCPP	1	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-2
PRE-ENVIRITE WASTE MATERIAL ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,4-Dichlorobenzene	3	0	ND	ND	ND	ND
2-Methylphenol	3	2	0.024	0.178	0.5	HMH941121WPW25C
4-Methylphenol	3	2	0.11	0.44	1.2	HMH941121WPW25C
Hexachloroethane	3	0	ND	ND	ND	ND
Nitrobenzene	3	0	ND	ND	ND	ND
Hexachlorobutadiene	3	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	3	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	3	0	ND	ND	ND	ND
2,4-Dinitrotoluene	3	0	ND	ND	ND	ND
Hexachlorobenzene	3	0	ND	ND	ND	ND
Pentachlorophenol	3	0	ND	ND	ND	ND
Pyridine	3	1	0.29	0.1033	0.29	HMH941121WPW25C
Arsenic	2	0	ND	ND	ND	ND
Barium	2	2	0.29	0.342	0.394	HMH941121WPW25C
Cadmium	2	1	5.71	2.8555	5.71	HMH941121WPW25C
Chromium	2	2	0.01	0.0635	0.117	HMH941121WPW25C
Lead	2	2	0.05	5.625	11.2	HMH941121WPW25C
Mercury	2	0	ND	ND	ND	ND
Selenium	2	0	ND	ND	ND	ND
Silver	2	0	ND	ND	ND	ND
Chlordane	3	0	ND	ND	ND	ND
Toxaphene	3	0	ND	ND	ND	ND
Endrin	3	0	ND	ND	ND	ND
Heptachlor	3	0	ND	ND	ND	ND
Heptachlor epoxide	3	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Vinyl chloride	2	0	ND	ND	ND	ND
1,1-Dichloroethene	2	0	ND	ND	ND	ND
Chloroform	2	0	ND	ND	ND	ND
1,2-Dichloroethane	2	0	ND	ND	ND	ND
2-Butanone	2	1	0.1	0.0525	0.1	HMH941121WPW25C
Carbon tetrachloride	2	0	ND	ND	ND	ND
Trichloroethene	2	1	0.024	0.0133	0.024	HMH941121WPW25C
Benzene	2	0	ND	ND	ND	ND
Tetrachloroethene	2	1	0.007	0.0048	0.007	HMH941121WPW25C
Chlorobenzene	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied or maximum, only one location is indicated.

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenol	38	2	0.15	3.1159	25.	HMH941115SLW24E
Bis(2-chloroethyl)ether	43	0	ND	ND	ND	ND
2-Chlorophenol	43	0	ND	ND	ND	ND
1,3-Dichlorobenzene	43	0	ND	ND	ND	ND
1,4-Dichlorobenzene	43	0	ND	ND	ND	ND
1,2-Dichlorobenzene	43	0	ND	ND	ND	ND
2-Methylphenol	39	3	0.036	2.4837	3.6	HMH941115SLW24E
2,2'-oxybis(1-Chloropropane)	38	0	ND	ND	ND	ND
4-Methylphenol	39	2	0.041	2.396	0.052	CW941207SLW30C
N-Nitroso-di-n-propylamine	43	0	ND	ND	ND	ND
Hexachloroethane	43	0	ND	ND	ND	ND
Nitrobenzene	43	0	ND	ND	ND	ND
Isophorone	43	4	0.008	2.4832	13.	HMH941115SLW24E
2-Nitrophenol	41	0	ND	ND	ND	ND
2,4-Dimethylphenol	41	2	0.013	2.2863	0.045	CW941208SLW32C
Bis(2-chloroethoxy)methane	43	0	ND	ND	ND	ND
2,4-Dichlorophenol	43	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	43	0	ND	ND	ND	ND
Naphthalene	43	18	0.007	1.6567	20.	HMH941115SLW24E
4-Chloroaniline	39	0	ND	ND	ND	ND
Hexachlorobutadiene	43	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	41	0	ND	ND	ND	ND
2-Methylnaphthalene	41	8	0.007	1.9203	4.	HMH940526SLW01B
Hexachlorocyclopentadiene	43	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	43	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	41	0	ND	ND	ND	ND
2-Chloronaphthalene	39	0	ND	ND	ND	ND
2-Nitroaniline	39	0	ND	ND	ND	ND
Dimethylphthalate	43	0	ND	ND	ND	ND
Acenaphthylene	43	3	0.006	2.1861	0.11	CW941207SLW28D
2,6-Dinitrotoluene	43	0	ND	ND	ND	ND
3-Nitroaniline	39	0	ND	ND	ND	ND
Acenaphthene	43	0	ND	ND	ND	ND
2,4-Dinitrophenol	42	0	ND	ND	ND	ND
4-Nitrophenol	40	0	ND	ND	ND	ND
Dibenzofuran	41	2	0.008	2.2967	0.42	HMH940526SLW01B
2,4-Dinitrotoluene	43	0	ND	ND	ND	ND
Diethylphthalate	43	19	0.007	2.2775	3.5	HMH941115SLW24E
4-Chlorophenyl phenyl ether	43	0	ND	ND	ND	ND
Fluorene	43	2	0.044	2.2009	0.53	HMH940526SLW01B
4-Nitroaniline	39	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	43	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	43	1	0.26	2.1986	0.26	HMH940526SLW01B
4-Bromophenyl phenyl ether	43	0	ND	ND	ND	ND
Hexachlorobenzene	43	0	ND	ND	ND	ND
Pentachlorophenol	43	0	ND	ND	ND	ND

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenanthrene	43	7	0.008	2.2073	1.4	HMH940526SLW01B
Anthracene	43	5	0.003	2.1943	0.71	HMH940601SLW03M
Carbazole	38	2	0.015	2.4539	0.042	CW941207SLW28D
Di-n-butylphthalate	43	37	0.008	11.5531	390.	HMH941115SLW24E
Fluoranthene	43	10	0.008	2.1787	1.1	HMH940526SLW01B
Pyrene	43	12	0.009	2.1821	1.1	HMH940601SLW03M
Butylbenzylphthalate	43	9	0.004	3.2153	34.	HMH941020SLW08A
3,3'-Dichlorobenzidine	43	0	ND	ND	ND	ND
Benzo(a)anthracene	43	4	0.011	2.1687	0.22	CW941207SLW28D
Chrysene	43	5	0.011	2.1841	0.35	CW941207SLW28D
Bis(2-ethylhexyl)phthalate	43	41	0.027	42.2474	690.	HMH941115SLW24E
Di-n-octylphthalate	43	32	0.01	0.7595	5.3	HMH940526SLW01B
Benzo(b)fluoranthene	43	5	0.007	2.1936	0.49	HMH940526SLW01B
Benzo(k)fluoranthene	43	5	0.009	2.1856	0.32	CW941207SLW28D
Benzo(a)pyrene	43	6	0.008	2.1843	0.28	CW941207SLW28D
Indeno(1,2,3-cd)pyrene	43	2	0.042	2.1899	0.11	CW941207SLW28D
Dibenzo(a,h)anthracene	43	1	0.027	2.192	0.027	CW941207SLW28D
Benzo(g,h,i)perylene	43	2	0.04	2.1895	0.092	CW941207SLW28D
Pyridine	2	0	ND	ND	ND	ND
N-Nitrosodimethylamine	4	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Benzyl alcohol	3	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	3	0	ND	ND	ND	ND
Benzoic acid	1	0	ND	ND	ND	ND
Benzidine	2	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	2	0	ND	ND	ND	ND
Acetophenone	2	0	ND	ND	ND	ND
2-Acetylaminofluorene	2	0	ND	ND	ND	ND
4-Aminobiphenyl	2	0	ND	ND	ND	ND
Aniline	2	0	ND	ND	ND	ND
Bis(2-chloro-1-methylethyl)ether	2	0	ND	ND	ND	ND
p-Chloroaniline	2	0	ND	ND	ND	ND
Chlorobenzilate	2	0	ND	ND	ND	ND
p-CHLOROM-CRESOL	2	0	ND	ND	ND	ND
m-Cresol	0	0	NA	ND	NA	NA
o-CRESOL	2	0	ND	ND	ND	ND
p-Cresol	2	0	ND	ND	ND	ND
Diallate	2	0	ND	ND	ND	ND
Dimethoate	2	0	ND	ND	ND	ND
p-(Dimethylamino)azobenzene	2	0	ND	ND	ND	ND
7,12-Dimethylbenz(a)anthracene	2	0	ND	ND	ND	ND
3,3'-Dimethylbenzidine	2	0	ND	ND	ND	ND
alpha,alpha-Dimethylphenethylamine	2	0	ND	ND	ND	ND
m-Dinitrobenzene	2	0	ND	ND	ND	ND
Diphenylamine	2	0	ND	ND	ND	ND
Disulfoton	2	0	ND	ND	ND	ND
Ethyl methanesulfonate	2	0	ND	ND	ND	ND

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Famphur	2	0	ND	ND	ND	ND
Hexachlorophene	2	0	ND	ND	ND	ND
Hexachloroprene	2	0	ND	ND	ND	ND
Isodrin	2	0	ND	ND	ND	ND
Isosaphrole	2	0	ND	ND	ND	ND
Kepone	2	0	ND	ND	ND	ND
Methapyriline	2	0	ND	ND	ND	ND
3-Methylcholanthrene	2	0	ND	ND	ND	ND
Methyl methanesulfonate	2	0	ND	ND	ND	ND
Methylparathlon	2	0	ND	ND	ND	ND
1,4-Naphthoquinone	2	0	ND	ND	ND	ND
1-Naphthylamine	2	0	ND	ND	ND	ND
2-Naphthylamine	2	0	ND	ND	ND	ND
o-Nitroaniline	2	0	ND	ND	ND	ND
m-Nitroaniline	2	0	ND	ND	ND	ND
p-Nitroaniline	2	0	ND	ND	ND	ND
o-Nitrophenol	2	0	ND	ND	ND	ND
p-Nitrophenol	2	0	ND	ND	ND	ND
4-Nitroquinoline 1-oxide	2	0	ND	ND	ND	ND
n-Nitrosodiethylamine	2	0	ND	ND	ND	ND
n-Nitrosodi-n-butylamine	2	0	ND	ND	ND	ND
n-Nitrosomethylethylamine	2	0	ND	ND	ND	ND
n-Nitrosomorpholine	2	0	ND	ND	ND	ND
n-Nitrosodipiperidine	4	0	ND	ND	ND	ND
n-Nitrosopyrrolidine	2	0	ND	ND	ND	ND
5-Nitro-o-toluidine	2	0	ND	ND	ND	ND
Pentachlorobenzene	2	0	ND	ND	ND	ND
Pentachloronitrobenzene	2	0	ND	ND	ND	ND
Phenacetin	2	0	ND	ND	ND	ND
2-Picoline	2	0	ND	ND	ND	ND
Pronamide	2	0	ND	ND	ND	ND
Safrole	2	0	ND	ND	ND	ND
Sulfotep	2	0	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	2	0	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	2	0	ND	ND	ND	ND
o-Toluidine	2	0	ND	ND	ND	ND
o,o,o-Triethylphoaphorothioate	2	0	ND	ND	ND	ND
sym-Trinitrobenzene	2	0	ND	ND	ND	ND
Thionazin	0	0	NA	ND	NA	NA
n-Nitrodipropylamine	2	0	ND	ND	ND	ND
Parathlon	2	0	ND	ND	ND	ND
2-Chloronaphthalene	2	0	ND	ND	ND	ND
Aramite	2	0	ND	ND	ND	ND
p-Phenylenediamine	2	0	ND	ND	ND	ND
Phorate	2	0	ND	ND	ND	ND
Antimony	44	0	ND	ND	ND	ND
Arsenic	46	44	0.2	2.0433	7.5	CW941207SLW31E

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Barium	46	46	13.2	55.9391	149.	CW941212SLW35D
Beryllium	44	33	0.25	0.5073	2.8	HMH941020SLW08A
Cadmium	46	25	0.34	3.476	39.	HMH940526SLW01B
Chromium	46	46	10.	132.7543	3820.	HMH940601SLW03B
Cobalt	44	44	2.	7.975	16.	HMH940601SLW03K
Copper	46	46	13.3	1072.0565	28400.	HMH940601SLW03B
Lead	46	46	6.5	72.813	862.	HMH940601SLW03B
Mercury	46	6	0.062	0.071	0.33	CW941212SLW35D
Nickel	46	46	5.7	126.5217	3470.	HMH940601SLW03B
Selenium	46	13	0.21	0.3049	1.3	HMH941115SLW24E
Silver	46	11	0.78	2.4412	78.5	HMH940601SLW03B
Thallium	44	19	0.22	0.5915	8.2	HMH940601SLW03K
Tin	44	2	4.2	2.3898	12.2	HMH941109SLW18C
Vanadium	44	43	6.2	22.3705	39.	HMH941109SLW18C
Zinc	45	45	31.9	277.58	5800.	HMH940601SLW03B
Alpha-BHC	36	1	0.0002	0.0103	0.0002	HMH941121SLW25A
Beta-BHC	36	0	ND	ND	ND	ND
Delta-BHC	36	2	0.0008	0.0103	0.0009	CW941209SLW33D
Chlordane	4	0	ND	ND	ND	ND
Toxaphene	35	0	ND	ND	ND	ND
Endrin	36	0	ND	ND	ND	ND
Heptachlor	36	1	0.0007	0.0103	0.0007	CW941213SLW38G
Heptachlor epoxide	36	1	0.0004	0.0103	0.0004	HMH941121SLW25E
Gamma-BHC (Lindane)	36	4	0.0003	0.0104	0.003	HMH941109SLW18C
Methoxychlor	34	0	ND	ND	ND	ND
Aldrin	36	0	ND	ND	ND	ND
Endosulfan I	36	0	ND	ND	ND	ND
Dieldrin	36	0	ND	ND	ND	ND
4,4'-DDE	36	0	ND	ND	ND	ND
Endosulfan II	36	0	ND	ND	ND	ND
4,4'-DDD	36	1	0.011	0.0117	0.011	CW941207SLW28D
Endosulfan sulfate	36	0	ND	ND	ND	ND
4,4-DDT	36	2	0.0022	0.0115	0.003	CW941212SLW35D
Endrin ketone	34	0	ND	ND	ND	ND
Endrin aldehyde	36	0	ND	ND	ND	ND
alpha-Chlordane	33	0	ND	ND	ND	ND
gamma-Chlordane	33	1	0.19	0.007	0.19	HMH941121SLW25E
Aroclor 1016	36	0	ND	ND	ND	ND
Aroclor 1221	36	0	ND	ND	ND	ND
Aroclor 1232	36	0	ND	ND	ND	ND
Aroclor 1242	36	1	0.96	0.2736	0.96	HMH941103SLW14C
Aroclor 1248	36	2	0.097	0.2605	0.23	CW941213SLW37G
Aroclor 1254	34	19	0.0095	0.4643	18.	HMH941103SLW14C
Aroclor 1260	35	5	0.054	0.4406	5.6	HMH941103SLW14C
Tetrachloro-m-xylene	2	2	0.013	0.0135	0.014	CW941213SLW38G
Decachlorobiphenyl	2	2	0.019	0.02	0.021	CW941213SLW38G
Vinyl acetate	21	0	ND	ND	ND	ND

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Chloromethane	47	0	ND	ND	ND	ND
Bromomethane	47	0	ND	ND	ND	ND
Vinyl chloride	47	0	ND	ND	ND	ND
Chloroethane	47	0	ND	ND	ND	ND
Methylene chloride	46	33	0.0003	0.1338	0.92	HMH940601SLW03M
Acetone	45	38	0.0068	1.5052	47.	HMH941115SLW24E
Carbon disulfide	46	2	0.006	0.1716	0.027	HMH940601SLW03B
1,1-Dichloroethene	47	1	0.014	0.1676	0.014	W-01, S-3
1,1-Dichloroethane	47	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	42	8	0.001	0.1015	0.1	CW941208SLW32C
Cis-1,2-Dichloroethene	39	7	0.001	3.4103	130.	HMH940601SLW03K
Chloroform	47	4	0.14	0.1641	2.1	HMH941115SLW24E
1,2-Dichloroethane	47	1	0.0008	0.1675	0.0008	HMH941104SLW16C
2-Butanone	46	11	0.006	5.8418	260.	HMH941115SLW24E
1,1,1-Trichloroethane	47	0	ND	ND	ND	ND
Carbon tetrachloride	47	0	ND	ND	ND	ND
Bromodichloromethane	47	0	ND	ND	ND	ND
1,2-Dichloropropane	47	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	47	0	ND	ND	ND	ND
Trichloroethene	45	15	0.002	0.1622	43.	HMH941115SLW24E
Dibromochloromethane	47	0	ND	ND	ND	ND
1,1,2-Trichloroethane	47	0	ND	ND	ND	ND
Benzene	45	5	0.001	0.1465	0.57	HMH941115SLW24E
Cis-1,3-Dichloropropene	47	0	ND	ND	ND	ND
Bromoform	47	0	ND	ND	ND	ND
2-Hexanone	47	0	ND	ND	ND	ND
4-Methyl-2-pentanone	45	14	0.003	8.4309	240.	HMH941115SLW24E
Tetrachloroethene	45	19	0.001	0.3706	41.	HMH941115SLW24E
1,1,2,2-Tetrachloroethane	47	0	ND	ND	ND	ND
Toluene	45	25	0.0003	0.4828	170.	HMH941115SLW24E
Chlorobenzene	47	3	0.002	0.1556	0.38	HMH941115SLW24E
Ethylbenzene	45	21	0.001	1.2835	140.	HMH940601SLW03M
Styrene	47	7	0.011	3.8557	170.	HMH940601SLW03K
Xylenes (total)	45	28	0.0009	5.2555	470.	HMH940601SLW03M
2-Chloroethyl vinyl ether	5	0	ND	ND	ND	ND
1,2,3-Trichloropropane	2	0	ND	ND	ND	ND
Iodomethane	2	0	ND	ND	ND	ND
1,4-Dichloro-2-butene	2	0	ND	ND	ND	ND
Ethyl methacrylate	2	0	ND	ND	ND	ND
Acrolein	2	0	ND	ND	ND	ND
Acrylonitrile	2	0	ND	ND	ND	ND
Allyl chloride	2	0	ND	ND	ND	ND
Acetonitrile	2	0	ND	ND	ND	ND
Chloroprene	2	0	ND	ND	ND	ND
Methacrylonitrile	2	0	ND	ND	ND	ND
Methylmethacrylate	2	0	ND	ND	ND	ND
1,4-Dioxane	2	0	ND	ND	ND	ND

TABLE 9-3
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Dibromoethane	2	0	ND	ND	ND	ND
Pentachloroethane	2	0	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	2	0	ND	ND	ND	ND
Trichlorofluoromethane	0	0	NA	ND	NA	NA
MCPA	11	0	ND	ND	ND	ND
MCPP	11	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-4
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,4-Dichlorobenzene	32	0	ND	ND	ND	ND
2-Methylphenol	32	1	0.02	0.0103	0.02	HMH941115SLW24E
4-Methylphenol	31	1	0.05	0.0113	0.05	HMH941115SLW24E
Hexachloroethane	32	0	ND	ND	ND	ND
Nitrobenzene	32	0	ND	ND	ND	ND
Hexachlorobutadiene	32	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	32	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	32	0	ND	ND	ND	ND
2,4-Dinitrotoluene	32	0	ND	ND	ND	ND
Hexachlorobenzene	32	0	ND	ND	ND	ND
Pentachlorophenol	32	0	ND	ND	ND	ND
Pyridine	32	0	ND	ND	ND	ND
Antimony	1	0	ND	ND	ND	ND
Arsenic	18	0	ND	ND	ND	ND
Barium	18	17	0.22	0.3526	0.47	HMH941104SLW15D
Beryllium	1	0	ND	ND	ND	ND
Cadmium	18	15	0.003	0.0237	0.25	HMH941115SLW24E
Chromium	18	17	0.003	0.0236	0.11	HMH941104SLW15D
Cobalt	1	0	ND	ND	ND	ND
Copper	1	1	0.069	0.069	0.069	HMH940601SLW03B
Lead	18	11	0.02	0.0424	0.24	HMH941115SLW24E
Mercury	18	1	0.008	0.0015	0.008	HMH941121SLW25E
Nickel	1	1	0.046	0.046	0.046	HMH940601SLW03B
Selenium	17	0	ND	ND	ND	ND
Silver	18	0	ND	ND	ND	ND
Thallium	1	0	ND	ND	ND	ND
Tin	1	0	ND	ND	ND	ND
Vanadium	1	0	ND	ND	ND	ND
Zinc	1	1	0.025	0.025	0.025	HMH940601SLW03B
Alpha-BHC	2	0	ND	ND	ND	ND
Beta-BHC	2	0	ND	ND	ND	ND
Delta-BHC	2	0	ND	ND	ND	ND
Chlordane	34	0	ND	ND	ND	ND
Toxaphene	34	0	ND	ND	ND	ND
Endrin	34	0	ND	ND	ND	ND
Heptachlor	34	1	0.	0.0001	0.	CW941213SLW38G
Heptachlor epoxide	34	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	34	0	ND	ND	ND	ND
Methoxychlor	34	0	ND	ND	ND	ND
Aldrin	2	0	ND	ND	ND	ND
Endosulfan I	2	0	ND	ND	ND	ND
Dieldrin	2	0	ND	ND	ND	ND
4,4'-DDE	2	0	ND	ND	ND	ND
Endosulfan II	2	0	ND	ND	ND	ND
4,4'-DDD	2	0	ND	ND	ND	ND
Endosulfan sulfate	2	0	ND	ND	ND	ND
4,4-DDT	2	0	ND	ND	ND	ND

TABLE 9-4
PRE-ENVIRITE WASTE MATERIAL SOIL ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endrin ketone	2	0	ND	ND	ND	ND
Endrin aldehyde	2	0	ND	ND	ND	ND
alpha-Chlordane	2	0	ND	ND	ND	ND
gamma-Chlordane	2	0	ND	ND	ND	ND
Aroclor 1016	2	0	ND	ND	ND	ND
Aroclor 1221	2	0	ND	ND	ND	ND
Aroclor 1232	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1248	2	0	ND	ND	ND	ND
Aroclor 1254	2	0	ND	ND	ND	ND
Aroclor 1260	2	0	ND	ND	ND	ND
Tetrachloro-m-xylene	2	2	0.0002	0.0002	0.0002	CW941213SLW38D
Decachlorobiphenyl	2	2	0.0003	0.0003	0.0003	CW941213SLW38D
Vinyl chloride	21	0	ND	ND	ND	ND
1,1-Dichloroethene	21	0	ND	ND	ND	ND
Chloroform	21	3	0.001	0.0032	0.02	HMH941115SLW24E
1,2-Dichloroethane	21	1	0.001	0.0054	0.001	CW941212SLW36D
2-Butanone	21	5	0.02	0.0424	0.45	HMH941115SLW24E
Carbon tetrachloride	21	0	ND	ND	ND	ND
Trichloroethene	20	10	0.001	0.0037	0.16	HMH941115SLW24H
Benzene	21	2	0.002	0.0038	0.03	HMH941115SLW24E
Tetrachloroethene	21	10	0.001	0.0873	1.5	HMH941115SLW24E
Chlorobenzene	21	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-5
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenol	32	2	0.28	0.1734	0.32	HMH940523SLL04D
Bis(2-chloroethyl)ether	37	0	ND	ND	ND	ND
2-Chlorophenol	37	0	ND	ND	ND	ND
1,3-Dichlorobenzene	37	0	ND	ND	ND	ND
1,4-Dichlorobenzene	37	0	ND	ND	ND	ND
Hexachloroethane	37	0	ND	ND	ND	ND
Nitrobenzene	37	0	ND	ND	ND	ND
Hexachlorobutadiene	37	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	37	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	5	0	ND	ND	ND	ND
2,4-Dinitrotoluene	37	0	ND	ND	ND	ND
Hexachlorobenzene	37	0	ND	ND	ND	ND
Pentachlorophenol	37	0	ND	ND	ND	ND
Pyridine	5	0	ND	ND	ND	ND
1,2-Dichlorobenzene	37	5	0.017	0.151	0.13	HMH940518SLL06G
N-Nitroso-di-n-propylamine	37	0	ND	ND	ND	ND
Isophorone	37	0	ND	ND	ND	ND
2-Nitrophenol	32	0	ND	ND	ND	ND
2,4-Dimethylphenol	32	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	37	1	0.59	0.1765	0.59	HMH940519SLL05E
2,4-Dichlorophenol	37	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	37	4	0.062	0.183	0.87	HMH940518SLL06A
Naphthalene	37	9	0.024	0.4072	3.6	HMH940519SLL05E
4-Chloroaniline	0	0	NA	ND	NA	NA
4-Chloro-3-methylphenol	32	0	ND	ND	ND	ND
2-Methylnaphthalene	5	2	0.028	0.1606	0.28	HMH940520SLL01C
Hexachlorocyclopentadiene	37	0	ND	ND	ND	ND
2-Chloronaphthalene	32	0	ND	ND	ND	ND
Dimethyl phthalate	37	0	ND	ND	ND	ND
Acenaphthylene	37	3	0.02	0.1763	0.84	HMH940523SLL04G
2,6-Dinitrotoluene	37	0	ND	ND	ND	ND
Acenaphthene	37	4	0.58	0.2572	1.4	HMH940523SLL04G
2,4-Dinitrophenol	37	0	ND	ND	ND	ND
4-Nitrophenol	32	0	ND	ND	ND	ND
Dibenzofuran	5	1	1.8	0.492	1.8	HMH940519SLL05F
Diethyl phthalate	37	7	0.016	0.1404	0.074	CW940511SLL10D
4-Chlorophenyl phenyl ether	37	0	ND	ND	ND	ND
Fluorene	37	3	0.067	0.1688	0.29	HMH940519SLL05D
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	37	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	37	3	0.87	0.2311	1.2	HMH940519SLL05F
4-Bromophenyl phenyl ether	37	0	ND	ND	ND	ND
Phenanthrene	37	15	0.013	0.2065	2.1	HMH940523SLL04G
Anthracene	37	4	0.066	0.1644	0.36	HMH940519SLL05F
Di-n-butylphthalate	37	7	0.028	0.1614	0.32	HMH940523SLL04B
Fluoranthene	37	8	0.048	0.2068	1.8	HMH940523SLL04G
Pyrene	37	9	0.025	0.1876	1.6	HMH940523SLL04G

TABLE 9-5
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Butylbenzylphthalate	37	3	0.032	0.1692	0.43	HMH940519SLL05E
3,3'-Dichlorobenzidine	37	0	ND	ND	ND	ND
Benzo(a)anthracene	37	5	0.026	0.152	0.13	HMH940523SLL09C
Chrysene	37	2	0.048	0.1593	0.072	HMH940519SLL08E
Bis(2-ethylhexyl)phthalate	37	32	0.04	0.7022	6.1	CW940513SLL03E
Di-n-octylphthalate	37	17	0.022	0.1123	0.14	CW940513SLL03E
Benzo(b)fluoranthene	37	4	0.045	0.1555	0.093	HMH940523SLL04F
Benzo(k)fluoranthene	37	3	0.064	0.1572	0.077	HMH940523SLL04F
Benzo(a)pyrene	37	3	0.037	0.1571	0.097	HMH940523SLL09E
Indeno(1,2,3-cd)pyrene	37	0	ND	ND	ND	ND
Dibenzo(a,h)anthracene	37	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	37	0	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	5	0	ND	ND	ND	ND
Benzidine	32	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	32	0	ND	ND	ND	ND
N-Nitrosodimethylamine	37	2	0.048	0.1604	0.11	HMH940523SLL04G
1,2-Diphenylhydrazine	32	0	ND	ND	ND	ND
1,4-Naphthoquinone	5	0	ND	ND	ND	ND
1-Naphthylamine	5	0	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	5	0	ND	ND	ND	ND
2,6-Dichlorophenol	5	0	ND	ND	ND	ND
2-Acetylaminofluorene	5	0	ND	ND	ND	ND
2-Chloronaphthalene	5	0	ND	ND	ND	ND
2-Naphthylamine	5	0	ND	ND	ND	ND
2-Picoline	5	0	ND	ND	ND	ND
3,3'-Dimethylbenzidine	5	0	ND	ND	ND	ND
3-Methylcholanthrene	5	0	ND	ND	ND	ND
4-Aminobiphenyl	5	0	ND	ND	ND	ND
4-Nitroquinoline 1-oxide	5	0	ND	ND	ND	ND
5-Nitro-o-toluidine	5	0	ND	ND	ND	ND
7,12-Dimethylbenz(a)anthracene	5	0	ND	ND	ND	ND
Acetophenone	5	0	ND	ND	ND	ND
alpha,alpha-Dimethylphenethylamine	5	0	ND	ND	ND	ND
Aniline	5	0	ND	ND	ND	ND
Aramite	5	0	ND	ND	ND	ND
Benzoic acid	0	0	NA	ND	NA	NA
Benzyl alcohol	5	0	ND	ND	ND	ND
Bis(2-chloro-1-methylethyl)ether	5	0	ND	ND	ND	ND
Chlorobenzilate	5	0	ND	ND	ND	ND
Diallate	5	0	ND	ND	ND	ND
Dimethoate	5	0	ND	ND	ND	ND
Diphenylamine	5	0	ND	ND	ND	ND
Disulfoton	5	0	ND	ND	ND	ND
Ethyl methanesulfonate	5	0	ND	ND	ND	ND
Famphur	5	0	ND	ND	ND	ND
Hexachlorophene	5	0	ND	ND	ND	ND
Hexachloroprene	5	0	ND	ND	ND	ND

TABLE 9-5
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Isodrin	5	0	ND	ND	ND	ND
Isosaphrole	5	0	ND	ND	ND	ND
Kepone	5	0	ND	ND	ND	ND
m-Dinitrobenzene	5	0	ND	ND	ND	ND
m-Nitroaniline	5	0	ND	ND	ND	ND
Methapyriline	5	0	ND	ND	ND	ND
Methyl methanesulfonate	5	0	ND	ND	ND	ND
Methylparathion	5	0	ND	ND	ND	ND
N-Nitrodipropylamine	5	0	ND	ND	ND	ND
N-Nitrosodi-n-butylamine	5	0	ND	ND	ND	ND
N-Nitrosodiethylamine	5	0	ND	ND	ND	ND
N-Nitrosodipiperidine	5	0	ND	ND	ND	ND
N-Nitrosomethylethylamine	5	0	ND	ND	ND	ND
N-Nitrosomorpholine	5	0	ND	ND	ND	ND
N-Nitrosopyrrolidine	5	0	ND	ND	ND	ND
O,O,O-Triethylphosphorothioate	5	0	ND	ND	ND	ND
O-Cresol	5	0	ND	ND	ND	ND
O-Nitroaniline	5	0	ND	ND	ND	ND
o-Nitrophenol	5	0	ND	ND	ND	ND
o-Toluidine	5	0	ND	ND	ND	ND
p-(Dimethylamino)azobenzene	5	0	ND	ND	ND	ND
p-Chloroaniline	5	0	ND	ND	ND	ND
p-Chloro-m-cresol	5	0	ND	ND	ND	ND
p-Cresol	5	0	ND	ND	ND	ND
p-Nitroaniline	5	0	ND	ND	ND	ND
p-Nitrophenol	5	0	ND	ND	ND	ND
p-Phenylenediamine	5	0	ND	ND	ND	ND
Parathion	5	0	ND	ND	ND	ND
Pentachlorobenzene	5	0	ND	ND	ND	ND
Pentachloronitrobenzene	5	0	ND	ND	ND	ND
Phenacetin	5	0	ND	ND	ND	ND
Phorate	5	0	ND	ND	ND	ND
Pronamide	5	0	ND	ND	ND	ND
Safrole	5	0	ND	ND	ND	ND
Sulfotep	5	0	ND	ND	ND	ND
sym-Trinitrobenzene	5	0	ND	ND	ND	ND
Thionazin	0	0	NA	ND	NA	NA
Silver	46	39	1.	15.1501	60.	CW940513SLL03D
Barium	46	39	16.	58.712	230.	CW940513SLL03E
Cadmium	46	39	0.46	57.3108	780.	HMH940523SLL04D
Cobalt	9	6	6.	11.1278	46.	HMH940520SLL01C
Chromium	46	39	18.	2454.6987	7300.	CW940513SLL03C
Copper	46	39	500.	13683.4798	170000.	CW940513SLL03E
Mercury	46	36	0.056	0.5239	12.	HMH940523SLL09C
Nickel	46	39	0.58	1081.4823	4600.	HMH940524SLL02D
Lead	46	39	69.	1319.5915	13000.	CW940513SLL03E
Antimony	8	1	76.	11.575	76.	HMH940519SLL05F

TABLE 9-5
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Tin	9	6	48.	251.0222	840.	HMH940525SLL01D
Zinc	45	39	0.016	868.7699	12000.	HMH940523SLL09B
Arsenic	46	28	1.	4.3004	53.	HMH940523SLL04G
Selenium	44	4	2.	0.9866	2.4	HMH940523SLL04G
Beryllium	9	3	3.5	6.2367	35.	HMH940520SLL01C
Thallium	9	6	16.	14.1778	32.	HMH940519SLL05F
Vanadium	9	2	84.	40.6111	240.	HMH940519SLL05F
Alpha-BHC	32	0	ND	ND	ND	ND
Beta-BHC	32	0	ND	ND	ND	ND
Delta-BHC	32	0	ND	ND	ND	ND
Chlordane	32	0	ND	ND	ND	ND
Endrin	32	0	ND	ND	ND	ND
Heptachlor	32	0	ND	ND	ND	ND
Heptachlor epoxide	32	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	32	1	0.51	0.1758	0.51	HMH940523SLL09C
Toxaphene	32	0	ND	ND	ND	ND
Aldrin	32	0	ND	ND	ND	ND
Endosulfan I	32	0	ND	ND	ND	ND
Dieldrin	32	0	ND	ND	ND	ND
4,4'-DDE	32	0	ND	ND	ND	ND
Endosulfan II	32	0	ND	ND	ND	ND
4,4'-DDD	32	0	ND	ND	ND	ND
Endosulfan sulfate	32	0	ND	ND	ND	ND
4,4-DDT	32	0	ND	ND	ND	ND
Endrin aldehyde	32	0	ND	ND	ND	ND
Aroclor 1016	32	0	ND	ND	ND	ND
Aroclor 1221	32	0	ND	ND	ND	ND
Aroclor 1232	32	0	ND	ND	ND	ND
Aroclor 1242	32	0	ND	ND	ND	ND
Aroclor 1248	32	0	ND	ND	ND	ND
Aroclor 1254	32	0	ND	ND	ND	ND
Aroclor 1260	32	0	ND	ND	ND	ND
Chloromethane	45	0	ND	ND	ND	ND
Benzene	45	16	0.0012	0.1341	3.9	CW940513SLL03E
Carbon tetrachloride	45	0	ND	ND	ND	ND
Chlorobenzene	45	3	0.003	0.0542	0.014	HMH940519SLL05F
Chloroform	45	17	0.0013	0.1064	2.6	HMH940518SLL06F
2-Butanone	45	14	0.0011	0.0544	0.038	CW940513SLL03C
Tetrachloroethene	41	33	0.001	0.2102	7.1	HMH940520SLL07C
Trichloroethene	43	23	0.001	0.0682	0.7	HMH940519SLL08D
Vinyl chloride	45	0	ND	ND	ND	ND
1,2-Dichloroethane	45	0	ND	ND	ND	ND
1,1-Dichloroethene	45	1	0.0023	0.0539	0.0023	HMH940519SLL08D
Bromomethane	45	0	ND	ND	ND	ND
Chloroethane	45	0	ND	ND	ND	ND
Acetone	44	34	0.0014	0.064	0.46	HMH940523SLL04G
Methylene chloride	45	40	0.0029	0.1302	2.6	HMH940518SLL06G

TABLE 9-5
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Carbon disulfide	45	27	0.0013	0.0657	1.2	HMH940518SLL06F
Trans-1,2-Dichloroethene	45	1	0.0046	0.054	0.0046	HMH940519SLL08D
1,1-Dichloroethane	45	0	ND	ND	ND	ND
Vinyl acetate	45	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	44	2	0.011	0.0731	0.8	HMH940519SLLX02
1,1,1-Trichloroethane	45	6	0.0013	0.0534	0.83	HMH940523SLL04F
1,2-Dichloropropane	45	2	0.34	0.0551	0.65	HMH940523SLL04F
Bromodichloromethane	45	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	45	0	ND	ND	ND	ND
4-Methyl-2-pentanone	45	12	0.001	0.0535	0.0081	HMH940519SLL05E
Cis-1,3-Dichloropropene	45	0	ND	ND	ND	ND
Toluene	43	15	0.001	0.034	0.21	HMH940518SLL06G
Trans-1,3-Dichloropropene	45	0	ND	ND	ND	ND
1,1,2-Trichloroethane	45	0	ND	ND	ND	ND
2-Hexanone	45	0	ND	ND	ND	ND
Dibromochloromethane	45	0	ND	ND	ND	ND
Ethylbenzene	45	13	0.0015	0.1143	1.8	HMH940519SLL05F
Xylenes (total)	45	19	0.0018	0.5025	15.	HMH940519SLL05F
Styrene	45	0	ND	ND	ND	ND
Bromoform	45	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	45	1	0.0013	0.0539	0.0013	HMH940523SLL04D
1,2,3-Trichloropropane	6	0	ND	ND	ND	ND
Iodomethane	6	0	ND	ND	ND	ND
1,4-Dichloro-2-butene	6	0	ND	ND	ND	ND
Ethyl methacrylate	6	0	ND	ND	ND	ND
Acrolein	6	0	ND	ND	ND	ND
Acrylonitrile	6	1	0.87	0.1658	0.87	HMH940525SLL01C
Allyl chloride	6	0	ND	ND	ND	ND
Acetonitrile	6	0	ND	ND	ND	ND
Chloroprene	6	0	ND	ND	ND	ND
Methacrylonitrile	6	0	ND	ND	ND	ND
Methyl methacrylate	6	0	ND	ND	ND	ND
1,4-Dioxane	6	0	ND	ND	ND	ND
1,2-Dibromoethane	6	0	ND	ND	ND	ND
Pentachloroethane	6	0	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	6	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-6
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Diphenylhydrazine	5	0	ND	ND	ND	ND
Benzidine	5	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	5	0	ND	ND	ND	ND
N-Nitrosodimethylamine	5	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	1	0.005	0.005	0.005	HMH940518SLL06A
1,2-Dichlorobenzene	5	0	ND	ND	ND	ND
1,3-Dichlorobenzene	5	0	ND	ND	ND	ND
1,4-Dichlorobenzene	5	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	5	1	0.002	0.0044	0.002	HMH940519SLL05E
2,4-Dichlorophenol	5	1	0.032	0.0104	0.032	HMH940519SLL05E
2,4-Dimethylphenol	5	0	ND	ND	ND	ND
2,4-Dinitrophenol	5	0	ND	ND	ND	ND
2,4-Dinitrotoluene	5	0	ND	ND	ND	ND
2,6-Dinitrotoluene	5	0	ND	ND	ND	ND
2-Chloronaphthalene	5	0	ND	ND	ND	ND
2-Chlorophenol	5	0	ND	ND	ND	ND
2-Nitrophenol	5	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	5	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	5	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	5	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	5	0	ND	ND	ND	ND
4-Nitrophenol	5	0	ND	ND	ND	ND
Acenaphthene	5	0	ND	ND	ND	ND
Acenaphthylene	5	0	ND	ND	ND	ND
Anthracene	5	0	ND	ND	ND	ND
Benzo(a)anthracene	5	0	ND	ND	ND	ND
Benzo(a)pyrene	5	0	ND	ND	ND	ND
Benzo(b)fluoranthene	5	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	5	0	ND	ND	ND	ND
Benzo(k)fluoranthene	5	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	5	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	5	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	5	1	0.028	0.0096	0.028	HMH940519SLL05E
Butylbenzylphthalate	5	0	ND	ND	ND	ND
Chrysene	5	0	ND	ND	ND	ND
Di-n-butylphthalate	5	0	ND	ND	ND	ND
Di-n-octylphthalate	5	0	ND	ND	ND	ND
Dibenzo(a,h)anthracene	5	0	ND	ND	ND	ND
Diethyl phthalate	5	0	ND	ND	ND	ND
Dimethyl phthalate	5	0	ND	ND	ND	ND
Fluoranthene	5	0	ND	ND	ND	ND
Fluorene	5	0	ND	ND	ND	ND
Hexachlorobenzene	5	0	ND	ND	ND	ND
Hexachlorobutadiene	5	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	0	ND	ND	ND	ND
Hexachloroethane	5	0	ND	ND	ND	ND

TABLE 9-6
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Indeno(1,2,3-cd)pyrene	5	0	ND	ND	ND	ND
Isophorone	5	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	5	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	5	0	ND	ND	ND	ND
Naphthalene	5	3	0.011	0.0348	0.096	HMH940519SLL05D
Nitrobenzene	5	0	ND	ND	ND	ND
Pentachlorophenol	5	0	ND	ND	ND	ND
Phenanthrene	5	0	ND	ND	ND	ND
Phenol	5	0	ND	ND	ND	ND
Pyrene	5	0	ND	ND	ND	ND
Antimony	29	0	ND	ND	ND	ND
Beryllium	29	0	ND	ND	ND	ND
Cobalt	29	4	0.1	0.0593	0.13	HMH940525SLL01B
Thallium	29	0	ND	ND	ND	ND
Tin	29	0	ND	ND	ND	ND
Vanadium	29	0	ND	ND	ND	ND
Zinc	29	29	0.035	0.0903	0.32	HMH940523SLL09D
Copper	29	28	0.027	0.1397	0.58	HMH940523SLL04F
Nickel	29	27	0.031	0.0686	0.15	HMH940519SLL05D
Arsenic	29	5	0.0057	0.004	0.028	HMH940518SLL06C
Barium	29	0	ND	ND	ND	ND
Cadmium	29	4	0.013	0.0073	0.037	HMH940523SLL04F
Chromium	29	1	0.093	0.0225	0.093	HMH940523SLL09E
Lead	29	0	ND	ND	ND	ND
Mercury	29	0	ND	ND	ND	ND
Silver	29	0	ND	ND	ND	ND
4,4'-DDD	5	0	ND	ND	ND	ND
Alpha-BHC	5	0	ND	ND	ND	ND
Aroclor 1016	5	0	ND	ND	ND	ND
Aroclor 1221	5	0	ND	ND	ND	ND
Aroclor 1232	5	0	ND	ND	ND	ND
Aroclor 1248	5	0	ND	ND	ND	ND
Chlordane	5	0	ND	ND	ND	ND
Endosulfan sulfate	5	0	ND	ND	ND	ND
Endrin	5	0	ND	ND	ND	ND
Heptachlor epoxide	5	0	ND	ND	ND	ND
Toxaphene	5	0	ND	ND	ND	ND
Beta-BHC	5	0	ND	ND	ND	ND
Delta-BHC	5	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	5	0	ND	ND	ND	ND
Heptachlor	5	0	ND	ND	ND	ND
Aldrin	5	0	ND	ND	ND	ND
Endosulfan I	5	0	ND	ND	ND	ND
Dieldrin	5	0	ND	ND	ND	ND
4,4'-DDE	5	0	ND	ND	ND	ND
Endosulfan II	5	0	ND	ND	ND	ND
4,4-DDT	5	0	ND	ND	ND	ND

TABLE 9-6
LANDFILL RESIDUE ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endrin aldehyde	5	0	ND	ND	ND	ND
Aroclor 1242	5	0	ND	ND	ND	ND
Aroclor 1254	5	0	ND	ND	ND	ND
Aroclor 1260	5	0	ND	ND	ND	ND
Chloromethane	9	0	ND	ND	ND	ND
Vinyl chloride	9	0	ND	ND	ND	ND
Bromomethane	9	0	ND	ND	ND	ND
Chloroethane	9	0	ND	ND	ND	ND
Acetone	9	9	0.0011	0.0201	0.14	HMH940523SLL04G
1,1-Dichloroethene	9	0	ND	ND	ND	ND
Methylene chloride	9	9	0.0015	0.0068	0.025	HMH940523SLL04F
Carbon disulfide	9	4	0.0026	0.0065	0.02	HMH940523SLL04B
Trans-1,2-Dichloroethene	9	0	ND	ND	ND	ND
1,1-Dichloroethane	9	0	ND	ND	ND	ND
Vinyl acetate	9	0	ND	ND	ND	ND
2-Butanone	9	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	9	0	ND	ND	ND	ND
Chloroform	9	2	0.0021	0.0048	0.0064	HMH940523SLL04F
1,1,1-Trichloroethane	9	1	0.0036	0.0048	0.0036	HMH940523SLL04F
Carbon tetrachloride	9	0	ND	ND	ND	ND
1,2-Dichloroethane	9	2	0.0011	0.0042	0.0016	HMH940523SLL04F
Benzene	9	1	0.001	0.0046	0.001	HMH940523SLL04G
Trichloroethene	9	2	0.0003	0.0041	0.0017	HMH940523SLL04F
1,2-Dichloropropane	9	1	0.012	0.0058	0.012	HMH940523SLL04F
Bromodichloromethane	9	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	9	0	ND	ND	ND	ND
4-Methyl-2-pentanone	9	1	0.0008	0.0045	0.0008	HMH940523SLL04F
Cis-1,3-Dichloropropene	9	0	ND	ND	ND	ND
Toluene	9	2	0.0005	0.004	0.0008	HMH940523SLL04F
Trans-1,3-Dichloropropene	9	0	ND	ND	ND	ND
1,1,2-Trichloroethane	9	0	ND	ND	ND	ND
2-Hexanone	9	0	ND	ND	ND	ND
Tetrachloroethene	9	6	0.0006	0.0042	0.016	HMH940525SLL01B
Dibromochloromethane	9	0	ND	ND	ND	ND
Chlorobenzene	9	0	ND	ND	ND	ND
Ethylbenzene	9	0	ND	ND	ND	ND
Xylenes (total)	9	3	0.0006	0.0037	0.0018	HMH940523SLL04B
Styrene	9	2	0.0027	0.0132	0.081	HMH940523SLL09C
Bromoform	9	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	9	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-7
DRYWELL AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	2	0	ND	ND	ND	ND
Naphthalene	2	1	0.01	0.0875	0.01	HMH9411116SLD2A
2-Methylnaphthalene	2	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	2	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	2	0	ND	ND	ND	ND
Acenaphthene	2	0	ND	ND	ND	ND
Dibenzofuran	2	0	ND	ND	ND	ND
Diethylphthalate	2	0	ND	ND	ND	ND
Fluorene	2	1	0.025	0.095	0.025	HMH9411116SLD2A
N-Nitrosodiphenylamine	2	0	ND	ND	ND	ND
Phenanthrene	2	1	0.27	0.2175	0.27	HMH9411116SLD2A
Anthracene	2	1	0.048	0.1065	0.048	HMH9411116SLD2A
Di-n-butylphthalate	2	2	0.034	0.137	0.24	HMH9411116SLD1A
Fluoranthene	2	1	0.48	0.3225	0.48	HMH9411116SLD2A
Pyrene	2	1	0.4	0.2825	0.4	HMH9411116SLD2A
Butylbenzylphthalate	2	1	0.27	0.2175	0.27	HMH9411116SLD1A
Bis(2-ethylhexyl)phthalate	2	2	0.16	0.34	0.52	HMH9411116SLD1A
Di-n-octylphthalate	2	0	ND	ND	ND	ND
Benzo(b)fluoranthene	2	1	0.21	0.1875	0.21	HMH9411116SLD2A
Benzo(k)fluoranthene	2	1	0.25	0.2075	0.25	HMH9411116SLD2A
Benzo(a)pyrene	2	1	0.23	0.1975	0.23	HMH9411116SLD2A
N-Nitrosodimethylamine	2	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	2	0.69	2.745	4.8	HMH9411116SLD1A
Barium	2	2	56.	77.5	99.	HMH9411116SLD1A
Beryllium	2	2	0.6	0.64	0.68	HMH9411116SLD2A
Cadmium	2	1	4.5	2.3	4.5	HMH9411116SLD2A
Chromium	2	2	50.	74.	98.	HMH9411116SLD2A
Cobalt	2	2	10.	15.	20.	HMH9411116SLD1A
Copper	2	2	25.	122.5	220.	HMH9411116SLD2A
Lead	2	1	33.	16.8	33.	HMH9411116SLD2A
Mercury	2	1	0.027	0.0185	0.027	HMH9411116SLD2A
Nickel	2	2	20.	45.	70.	HMH9411116SLD2A
Silver	2	2	1.6	2.3	3.	HMH9411116SLD2A
Thallium	2	1	12.	8.	12.	HMH9411116SLD1A
Tin	2	0	ND	ND	ND	ND
Vanadium	2	2	24.	44.	64.	HMH9411116SLD1A
Zinc	2	2	49.	104.5	160.	HMH9411116SLD2A
Beta-BHC	2	0	ND	ND	ND	ND
Delta-BHC	2	1	0.0015	0.0012	0.0015	HMH9411116SLD1A
Heptachlor	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	2	2	0.0006	0.0009	0.0012	HMH9411116SLD2A
Methoxychlor	2	0	ND	ND	ND	ND
Aldrin	2	0	ND	ND	ND	ND
Endosulfan I	2	0	ND	ND	ND	ND
Dieldrin	2	1	0.0003	0.001	0.0003	HMH9411116SLD1A
4,4'-DDE	2	0	ND	ND	ND	ND

TABLE 9-7
DRYWELL AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endosulfan II	2	0	ND	ND	ND	ND
4,4-DDT	2	2	0.0014	0.0042	0.0069	HMH9411116SLD2A
Endrin aldehyde	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1254	2	2	0.0093	0.0282	0.047	HMH9411116SLD2A
Aroclor 1260	2	1	0.0095	0.013	0.0095	HMH9411116SLD1A
Vinyl acetate	2	0	ND	ND	ND	ND
Chloromethane	2	0	ND	ND	ND	ND
Bromomethane	2	0	ND	ND	ND	ND
Vinyl chloride	2	0	ND	ND	ND	ND
Chloroethane	2	0	ND	ND	ND	ND
Methylene chloride	2	0	ND	ND	ND	ND
Acetone	2	2	0.013	0.018	0.023	HMH9411116SLD2A
Carbon disulfide	2	0	ND	ND	ND	ND
1,1-Dichloroethene	2	0	ND	ND	ND	ND
1,1-Dichloroethane	2	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	2	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	2	0	ND	ND	ND	ND
Chloroform	2	0	ND	ND	ND	ND
1,2-Dichloroethane	2	0	ND	ND	ND	ND
2-Butanone	2	0	ND	ND	ND	ND
1,1,1-Trichloroethane	2	0	ND	ND	ND	ND
Carbon tetrachloride	2	0	ND	ND	ND	ND
Bromodichloromethane	2	0	ND	ND	ND	ND
1,2-Dichloropropane	2	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	2	0	ND	ND	ND	ND
Trichloroethene	2	0	ND	ND	ND	ND
Dibromochloromethane	2	0	ND	ND	ND	ND
1,1,2-Trichloroethane	2	0	ND	ND	ND	ND
Benzene	2	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2	0	ND	ND	ND	ND
Bromoform	2	0	ND	ND	ND	ND
2-Hexanone	2	0	ND	ND	ND	ND
4-Methyl-2-pentanone	2	0	ND	ND	ND	ND
Tetrachloroethene	2	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	2	0	ND	ND	ND	ND
Toluene	2	1	0.0011	0.0031	0.0011	HMH9411116SLD2A
Chlorobenzene	2	0	ND	ND	ND	ND
Ethylbenzene	2	1	0.0005	0.0028	0.0005	HMH9411116SLD2A
Styrene	2	0	ND	ND	ND	ND
Xylenes (total)	2	1	0.0024	0.0037	0.0024	HMH9411116SLD2A
2-Chloroethyl vinyl ether	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-8
DRYWELL AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Fluoranthene	1	0	ND	ND	ND	ND
Pyrene	1	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	1	1	0.001	0.001	0.001	HMH9411116SLD1A
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	0	ND	ND	ND	ND
Barium	2	0	ND	ND	ND	ND
Beryllium	2	0	ND	ND	ND	ND
Cadmium	2	0	ND	ND	ND	ND
Chromium	2	0	ND	ND	ND	ND
Cobalt	2	0	ND	ND	ND	ND
Copper	2	1	0.035	0.0225	0.035	HMH9411116SLD2A
Lead	2	0	ND	ND	ND	ND
Mercury	2	0	ND	ND	ND	ND
Nickel	2	0	ND	ND	ND	ND
Silver	2	1	0.035	0.025	0.035	HMH9411116SLD1A
Thallium	2	0	ND	ND	ND	ND
Tin	2	0	ND	ND	ND	ND
Vanadium	2	0	ND	ND	ND	ND
Zinc	2	2	0.063	0.0865	0.11	HMH9411116SLD2A
Beta-BHC	1	0	ND	ND	ND	ND
Delta-BHC	1	0	ND	ND	ND	ND
Heptachlor	1	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	1	0	ND	ND	ND	ND
Methoxychlor	1	0	ND	ND	ND	ND
Aldrin	1	0	ND	ND	ND	ND
Endosulfan I	1	0	ND	ND	ND	ND
Dieldrin	1	0	ND	ND	ND	ND
4,4'-DDE	1	0	ND	ND	ND	ND
Endosulfan II	1	0	ND	ND	ND	ND
4,4-DDT	1	0	ND	ND	ND	ND
Endrin aldehyde	1	0	ND	ND	ND	ND
Aroclor 1242	1	0	ND	ND	ND	ND
Aroclor 1254	1	0	ND	ND	ND	ND
Aroclor 1260	1	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-9
STORAGE AND TREATMENT BUILDING AOC SOILS ANALYTICAL DATA SUMMARY
(Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	17	0	ND	ND	ND	ND
2,4-Dichlorophenol	17	0	ND	ND	ND	ND
Naphthalene	17	3	0.009	0.1459	0.1	CW941130SLF6B
2-Methylnaphthalene	17	4	0.017	0.1805	0.64	CW941130SLF6B
2,4,6-Trichlorophenol	17	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	17	0	ND	ND	ND	ND
Acenaphthene	17	2	0.042	0.1831	0.56	CW941130SLF6B
Dibenzofuran	17	2	0.037	0.1757	0.44	CW941130SLF6B
Diethylphthalate	17	3	0.013	0.1591	0.31	CW940622SLF01A
Fluorene	17	2	0.046	0.1821	0.54	CW941130SLF6B
N-Nitrosodiphenylamine	17	0	ND	ND	ND	ND
Phenanthrene	17	10	0.012	0.2552	2.7	CW941130SLF6B
Anthracene	17	5	0.014	0.1442	0.4	CW941130SLF6B
Di-n-butylphthalate	17	16	0.014	0.1708	1.2	CW940622CNF03
Fluoranthene	17	9	0.012	0.2752	2.7	CW941130SLF6B
Pyrene	17	10	0.012	0.1908	1.7	CW941130SLF6B
Butylbenzylphthalate	17	1	0.048	0.1611	0.048	CW940622CNF01
Bis(2-ethylhexyl)phthalate	17	16	0.03	0.3428	1.6	CW940622SLF01A
Di-n-octylphthalate	17	8	0.015	0.1195	0.19	CW941129SLF7A
Benzo(b)fluoranthene	17	5	0.01	0.1726	0.81	CW941130SLF6B
Benzo(k)fluoranthene	17	5	0.007	0.1941	1.2	CW941130SLF6B
Benzo(a)pyrene	17	5	0.009	0.1716	0.81	CW941130SLF6B
N-Nitrosodimethylamine	17	0	ND	ND	ND	ND
2,6-Dichlorophenol	17	0	ND	ND	ND	ND
Antimony	12	0	ND	ND	ND	ND
Arsenic	12	12	0.56	1.21	3.1	CW941130SLF6A
Barium	12	12	25.5	36.325	60.6	CW941130SLF6B
Beryllium	12	7	0.33	0.4013	1.2	CW941130SLF11B
Cadmium	12	8	0.75	1.7504	4.4	CW941130SLF11B
Chromium	12	12	7.8	63.5833	284.	CW941201SLF10A
Cobalt	12	12	3.	6.4917	15.7	CW941201SLF10A
Copper	12	12	13.	182.4333	770.	CW941201SLF10A
Lead	12	12	4.4	19.8083	64.2	CW941130SLF6B
Mercury	12	0	ND	ND	ND	ND
Nickel	12	12	6.7	46.8917	218.	CW941201SLF10A
Selenium	12	1	0.38	0.13	0.38	CW941130SLF6B
Silver	12	6	0.64	0.9608	3.9	CW941130SLF11B
Thallium	12	2	0.25	0.16	0.28	CW941130SLF9A
Tin	12	2	5.5	2.2125	7.2	CW941130SLF11B
Vanadium	12	12	10.3	25.1667	66.2	CW941201SLF10A
Zinc	12	12	23.5	136.9083	651.	CW941201SLF10A
Alpha-BHC	1	0	ND	ND	ND	ND
Beta-BHC	13	0	ND	ND	ND	ND
Delta-BHC	13	1	0.0022	0.001	0.0022	CW940627SLF02B
Chlordane	1	0	ND	ND	ND	ND
Endrin	1	0	ND	ND	ND	ND

TABLE 9-9
STORAGE AND TREATMENT BUILDING AOC SOILS ANALYTICAL DATA SUMMARY
(Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Heptachlor	13	1	0.0015	0.0009	0.0015	CW940627SLF02B
Heptachlor epoxide	1	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	13	1	0.0007	0.0009	0.0007	CW941129SLF7A
Methoxychlor	13	2	0.0017	0.008	0.0048	CW941130SLF6A
Aldrin	13	1	0.0012	0.0009	0.0012	CW940627SLF02B
Endosulfan I	13	0	ND	ND	ND	ND
Dieldrin	13	1	0.0007	0.0017	0.0007	CW941201SLF10B
4,4'-DDE	13	2	0.0012	0.0017	0.0023	CW940627SLF02B
Endosulfan II	13	0	ND	ND	ND	ND
4,4'-DDD	1	0	ND	ND	ND	ND
Endosulfan sulfate	1	0	ND	ND	ND	ND
4,4-DDT	13	6	0.0004	0.0016	0.0032	CW941130SLF8B
Endrin ketone	1	0	ND	ND	ND	ND
Endrin aldehyde	13	4	0.0021	0.0023	0.0061	CW941130SLF8B
Aroclor 1242	12	0	ND	ND	ND	ND
Aroclor 1254	12	9	0.0039	0.3877	3.2	CW941130SLF6B
Aroclor 1260	11	5	0.0098	0.0172	0.45	CW941130SLF8A
Vinyl acetate	26	0	ND	ND	ND	ND
Chloromethane	26	1	0.0012	0.0049	0.0012	CW940622SLF05A
Bromomethane	26	0	ND	ND	ND	ND
Vinyl chloride	26	0	ND	ND	ND	ND
Chloroethane	26	0	ND	ND	ND	ND
Methylene chloride	25	23	0.0016	0.0053	0.017	CW940622SLF04A
Acetone	26	25	0.003	0.1435	2.6	CW940622CNF03
Carbon disulfide	26	0	ND	ND	ND	ND
1,1-Dichloroethene	26	0	ND	ND	ND	ND
1,1-Dichloroethane	26	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	26	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	26	0	ND	ND	ND	ND
Chloroform	26	16	0.0011	0.0042	0.0058	CW940622SLF01A
1,2-Dichloroethane	26	1	0.0035	0.0049	0.0035	CW940622SLF03A
2-Butanone	23	4	0.0011	0.0659	1.4	CW940622CNF01
1,1,1-Trichloroethane	26	2	0.0017	0.0064	0.045	CW940622CNF03
Carbon tetrachloride	26	0	ND	ND	ND	ND
Bromodichloromethane	26	0	ND	ND	ND	ND
1,2-Dichloropropane	26	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	26	0	ND	ND	ND	ND
Trichloroethene	26	8	0.0004	0.0057	0.036	CW940622CNF01
Dibromochloromethane	26	0	ND	ND	ND	ND
1,1,2-Trichloroethane	26	0	ND	ND	ND	ND
Benzene	26	2	0.0012	0.0047	0.0015	CW940622CNF03
Cis-1,3-Dichloropropene	26	0	ND	ND	ND	ND
Bromoform	25	0	ND	ND	ND	ND
2-Hexanone	25	4	0.002	0.0062	88.	CW940622CNF03
4-Methyl-2-pentanone	24	17	0.0006	0.0088	0.11	CW940622SLF01A
Tetrachloroethene	26	15	0.0004	0.0038	0.013	CW940622CNF03

TABLE 9-9
STORAGE AND TREATMENT BUILDING AOC SOILS ANALYTICAL DATA SUMMARY
(Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,1,2,2-Tetrachloroethane	26	0	ND	ND	ND	ND
Toluene	26	17	0.0004	3.6203	80.	CW940622CNF03
Chlorobenzene	26	0	ND	ND	ND	ND
Ethylbenzene	24	9	0.0005	0.0057	0.028	CW940622SLF01A
Styrene	26	10	0.0018	3.1722	82.	CW940622CNF01
Xylenes (total)	24	18	0.0004	0.0129	0.12	CW940622SLF01A
2-Chloroethyl vinyl ether	26	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-10
STORAGE AND TREATMENT BUILDING AOC SOILS ANALYTICAL DATA SUMMARY
(Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	1	0	ND	ND	ND	ND
2,4-Dichlorophenol	1	0	ND	ND	ND	ND
Naphthalene	1	0	ND	ND	ND	ND
2-Methylnaphthalene	1	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	1	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	1	0	ND	ND	ND	ND
Acenaphthene	1	0	ND	ND	ND	ND
Dibenzofuran	1	0	ND	ND	ND	ND
Diethylphthalate	1	0	ND	ND	ND	ND
Fluorene	1	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	1	0	ND	ND	ND	ND
Phenanthrene	1	0	ND	ND	ND	ND
Anthracene	1	0	ND	ND	ND	ND
Di-n-butylphthalate	1	1	0.001	0.001	0.001	CW941129SLF7A
Fluoranthene	2	0	ND	ND	ND	ND
Pyrene	2	0	ND	ND	ND	ND
Butylbenzylphthalate	1	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	3	1	0.001	0.0037	0.001	CW941129SLF7A
Di-n-octylphthalate	1	0	ND	ND	ND	ND
Benzo(b)fluoranthene	1	0	ND	ND	ND	ND
Benzo(k)fluoranthene	1	0	ND	ND	ND	ND
Benzo(a)pyrene	1	0	ND	ND	ND	ND
N-Nitrosodimethylamine	1	0	ND	ND	ND	ND
2,6-Dichlorophenol	1	0	ND	ND	ND	ND
Barium	3	3	0.174	0.2	0.228	CW941130SLF6A
Cadmium	7	1	0.0021	0.0012	0.0021	CW941130SLF11B
Chromium	12	7	0.0032	0.0085	0.0547	CW941130SLF9A
Lead	3	1	0.0191	0.012	0.0191	CW941130SLF6B
Mercury	2	0	ND	ND	ND	ND
Silver	1	0	ND	ND	ND	ND
Beta-BHC	5	0	ND	ND	ND	ND
Delta-BHC	5	0	ND	ND	ND	ND
Heptachlor	5	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	5	0	ND	ND	ND	ND
Methoxychlor	5	0	ND	ND	ND	ND
Aldrin	5	0	ND	ND	ND	ND
Endosulfan I	5	0	ND	ND	ND	ND
Dieldrin	5	0	ND	ND	ND	ND
4,4'-DDE	5	0	ND	ND	ND	ND
Endosulfan II	5	0	ND	ND	ND	ND

TABLE 9-10
STORAGE AND TREATMENT BUILDING AOC SOILS ANALYTICAL DATA SUMMARY
(Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
4,4-DDT	5	0	ND	ND	ND	ND
Endrin aldehyde	5	0	ND	ND	ND	ND
Aroclor 1242	5	0	ND	ND	ND	ND
Aroclor 1254	5	0	ND	ND	ND	ND
Aroclor 1260	5	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-11
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenol	2	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	2	0	ND	ND	ND	ND
2-Chlorophenol	34	0	ND	ND	ND	ND
1,3-Dichlorobenzene	2	0	ND	ND	ND	ND
1,4-Dichlorobenzene	2	0	ND	ND	ND	ND
1,2-Dichlorobenzene	2	0	ND	ND	ND	ND
2-Methylphenol	2	0	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	2	0	ND	ND	ND	ND
4-Methylphenol	2	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	2	0	ND	ND	ND	ND
Hexachloroethane	2	0	ND	ND	ND	ND
Nitrobenzene	2	0	ND	ND	ND	ND
Isophorone	2	0	ND	ND	ND	ND
2-Nitrophenol	2	0	ND	ND	ND	ND
2,4-Dimethylphenol	2	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	34	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2	0	ND	ND	ND	ND
Naphthalene	34	14	0.005	0.3558	8.4	CW941208SLR12H
4-Chloroaniline	2	0	ND	ND	ND	ND
Hexachlorobutadiene	2	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	2	0	ND	ND	ND	ND
2-Methylnaphthalene	34	12	0.008	1.4374	0.26	CW941129SLR13A
Hexachlorocyclopentadiene	2	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	34	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	34	0	ND	ND	ND	ND
2-Chloronaphthalene	2	0	ND	ND	ND	ND
2-Nitroaniline	2	0	ND	ND	ND	ND
Dimethylphthalate	2	0	ND	ND	ND	ND
Acenaphthylene	2	1	0.075	22.2875	0.075	CW941208SLR12F
2,6-Dinitrotoluene	2	0	ND	ND	ND	ND
3-Nitroaniline	2	0	ND	ND	ND	ND
Acenaphthene	34	14	0.011	1.4228	0.16	CW941129SLR13A
2,4-Dinitrophenol	2	0	ND	ND	ND	ND
4-Nitrophenol	2	0	ND	ND	ND	ND
Dibenzofuran	34	16	0.009	1.413	0.16	CW941129SLR13A
2,4-Dinitrotoluene	2	0	ND	ND	ND	ND
Diethylphthalate	34	7	0.012	1.4522	0.019	CW941123SLR7A
4-Chlorophenyl phenyl ether	2	0	ND	ND	ND	ND
Fluorene	34	19	0.013	1.4127	0.19	CW941129SLR16B
4-Nitroaniline	2	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6 Dinitro-o-cresol)	2	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	34	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	2	0	ND	ND	ND	ND
Hexachlorobenzene	2	0	ND	ND	ND	ND
Pentachlorophenol	2	0	ND	ND	ND	ND

TABLE 9-11
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Phenanthrene	34	30	0.016	1.6691	1.6	CW941129SLR16B
Anthracene	34	27	0.012	1.4032	0.37	CW941208SLR12B
Carbazole	2	1	0.019	22.2595	0.019	CW941208SLR12F
Di-n-butylphthalate	34	34	0.013	0.1955	3.8	CW941208SLR12H
Fluoranthene	34	31	0.014	1.9215	3.9	CW941208SLR12B
Pyrene	34	31	0.014	1.8396	3.3	CW941208SLR12B
Butylbenzylphthalate	34	5	0.01	1.4634	0.11	CW941130SLR1A
3,3'-Dichlorobenzidine	2	0	ND	ND	ND	ND
Benzo(a)anthracene	2	1	0.094	22.297	0.094	CW941208SLR12F
Chrysene	2	1	0.15	22.325	0.15	CW941208SLR12F
Bis(2-ethylhexyl)phthalate	34	34	0.037	17.2638	560.	CW941208SLR12H
Di-n-octylphthalate	34	15	0.006	0.1592	1.4	CW941208SLR12H
Benzo(b)fluoranthene	34	31	0.006	1.5877	1.4	CW941208SLR12B
Benzo(k)fluoranthene	34	31	0.011	1.5897	1.2	CW941208SLR12B
Benzo(a)pyrene	34	30	0.012	1.5757	1.3	CW941208SLR12B
Indeno(1,2,3-cd)pyrene	2	1	0.058	22.279	0.058	CW941208SLR12F
Dibenzo(a,h)anthracene	2	1	0.017	22.2585	0.017	CW941208SLR12F
Benzo(g,h,i)perylene	2	1	0.061	22.2805	0.061	CW941208SLR12F
N-Nitrosodimethylamine	32	1	0.37	0.1885	0.37	CW941129SLR10A
2,6-Dichlorophenol	32	0	ND	ND	ND	ND
Antimony	33	0	ND	ND	ND	ND
Arsenic	33	33	0.32	1.4036	3.7	CW941208SLR12H
Barium	33	33	17.9	47.4455	140.	HMH941118SLR5A
Beryllium	33	20	0.27	0.4147	3.4	CW941130SLR1A
Cadmium	33	20	0.28	2.228	36.2	CW941130SLR1A
Chromium	33	32	7.4	103.0955	1850.	CW941130SLR1A
Cobalt	33	32	3.	7.7152	29.1	CW941130SLR1A
Copper	33	33	10.8	271.4727	4640.	CW941130SLR1A
Lead	33	33	2.4	39.2273	403.	CW941130SLR1A
Mercury	33	9	0.022	0.0449	0.14	HMH941118SLR5A
Nickel	33	33	7.5	70.4636	1220.	CW941130SLR1A
Selenium	19	1	0.31	0.1239	0.31	CW941129SLR9B
Silver	33	15	0.6	1.4658	15.6	CW941130SLR1A
Thallium	33	6	0.26	2.1545	10.	HMH941117SLR4B
Tin	33	2	9.	6.5742	71.	CW941130SLR1A
Vanadium	33	30	9.	24.6727	123.	CW941130SLR1A
Zinc	33	33	31.	194.8121	2520.	CW941130SLR1A
Alpha-BHC	2	0	ND	ND	ND	ND
Beta-BHC	34	0	ND	ND	ND	ND
Delta-BHC	34	1	0.0003	0.001	0.0003	CW941130SLR2B
Toxaphene	2	0	ND	ND	ND	ND
Endrin	2	0	ND	ND	ND	ND
Heptachlor	34	0	ND	ND	ND	ND
Heptachlor epoxide	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	34	10	0.0001	0.001	0.0017	HMH941118SLR5B
Methoxychlor	34	6	0.0007	0.0096	0.01	HMH941118SLR5A
Aldrin	34	0	ND	ND	ND	ND

TABLE 9-11
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endosulfan I	34	0	ND	ND	ND	ND
Dieldrin	34	1	0.0011	0.002	0.0011	CW941129SLR15A
4,4'-DDE	34	12	0.0012	0.0024	0.008	CW941208SLR12B
Endosulfan II	34	0	ND	ND	ND	ND
4,4'-DDD	2	0	ND	ND	ND	ND
Endosulfan sulfate	2	0	ND	ND	ND	ND
4,4-DDT	34	27	0.0006	0.0034	0.015	CW941208SLR12B
Endrin ketone	2	0	ND	ND	ND	ND
Endrin aldehyde	34	3	0.008	0.0027	0.012	CW941129SLR15B
alpha-Chlordane	2	0	ND	ND	ND	ND
gamma-Chlordane	2	0	ND	ND	ND	ND
Aroclor 1016	2	0	ND	ND	ND	ND
Aroclor 1221	2	0	ND	ND	ND	ND
Aroclor 1232	2	0	ND	ND	ND	ND
Aroclor 1242	34	0	ND	ND	ND	ND
Aroclor 1248	2	1	0.99	0 5045	0.99	CW941208SLR12H
Aroclor 1254	34	20	0.012	0 2268	3.1	CW941208SLR12H
Aroclor 1260	34	13	0.024	0.1345	2.2	CW941208SLR12H
Vinyl acetate	39	0	ND	ND	ND	ND
Chloromethane	39	0	ND	ND	ND	ND
Bromomethane	39	0	ND	ND	ND	ND
Vinyl chloride	39	0	ND	ND	ND	ND
Chloroethane	39	0	ND	ND	ND	ND
Methylene chloride	39	20	0.0018	0.0188	0.51	CW941208SLR12H
Acetone	39	32	0.002	0.0238	0.019	CW941129SLR10C
Carbon disulfide	39	0	ND	ND	ND	ND
1,1-Dichloroethene	39	0	ND	ND	ND	ND
1,1-Dichloroethane	39	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	39	1	0.0022	0.0215	0.0022	CW941207SLR11B
Cis-1,2-Dichloroethene	39	11	0.0005	0.0204	0.002	CW941130SLR1A
Chloroform	39	28	0.0004	0.0204	0.0055	CW941129SLR14A
1,2-Dichloroethane	39	0	ND	ND	ND	ND
2-Butanone	39	3	0.0017	0.0213	0.0029	HMH941118SLR5A
1,1,1-Trichloroethane	39	1	0.0031	0.0215	0.0031	CW941129SLR9B
Carbon tetrachloride	39	0	ND	ND	ND	ND
Bromodichloromethane	39	0	ND	ND	ND	ND
1,2-Dichloropropane	39	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	39	0	ND	ND	ND	ND
Trichloroethene	39	23	0.0005	0.0202	0.0094	CW941130SLR1A
Dibromochloromethane	39	0	ND	ND	ND	ND
1,1,2-Trichloroethane	39	0	ND	ND	ND	ND
Benzene	39	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	39	0	ND	ND	ND	ND
Bromoform	39	0	ND	ND	ND	ND
2-Hexanone	39	1	0.0023	0.0215	0.0023	CW941129SLR13B
4-Methyl-2-pentanone	39	8	0.0009	0.0211	0.0038	CW941129SLR9C
Tetrachloroethene	39	27	0.0005	0.0199	0.008	CW941130SLR1A

TABLE 9-11
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,1,2,2-Tetrachloroethane	39	0	ND	ND	ND	ND
Toluene	39	29	0.0006	0 0161	0.073	CW941208SLR12H
Chlorobenzene	39	0	ND	ND	ND	ND
Ethylbenzene	39	23	0.0005	0.4146	16.	CW941208SLR12H
Styrene	39	6	0.0005	0.0212	0.01	CW941129SLR15A
Xylenes (total)	39	31	0.0008	1.0617	41.	CW941208SLR12H
2-Chloroethyl vinyl ether	37	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-12
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	4	0	ND	ND	ND	ND
1,4-Dichlorobenzene	2	0	ND	ND	ND	ND
2-Methylphenol	2	0	ND	ND	ND	ND
4-Methylphenol	2	0	ND	ND	ND	ND
Hexachloroethane	2	0	ND	ND	ND	ND
Nitrobenzene	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	4	0	ND	ND	ND	ND
Naphthalene	4	0	ND	ND	ND	ND
Hexachlorobutadiene	2	0	ND	ND	ND	ND
2-Methylnaphthalene	4	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	6	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	6	0	ND	ND	ND	ND
Acenaphthene	4	0	ND	ND	ND	ND
Dibenzofuran	4	0	ND	ND	ND	ND
2,4-Dinitrotoluene	2	0	ND	ND	ND	ND
Fluorene	4	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	4	0	ND	ND	ND	ND
Hexachlorobenzene	2	0	ND	ND	ND	ND
Pentachlorophenol	2	0	ND	ND	ND	ND
Phenanthrene	12	0	ND	ND	ND	ND
Anthracene	4	0	ND	ND	ND	ND
Di-n-butylphthalate	4	3	0.0004	0.0017	0.0008	CW941129SLR10A
Fluoranthene	15	0	ND	ND	ND	ND
Pyrene	15	0	ND	ND	ND	ND
Butylbenzylphthalate	4	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	12	11	0.0006	0.0396	0.46	CW941129SLR10B
Di-n-octylphthalate	4	0	ND	ND	ND	ND
Benzo(b)fluoranthene	12	0	ND	ND	ND	ND
Benzo(k)fluoranthene	13	0	ND	ND	ND	ND
Benzo(a)pyrene	10	0	ND	ND	ND	ND
Pyridine	2	0	ND	ND	ND	ND
N-Nitrosodimethylamine	4	0	ND	ND	ND	ND
2,6-Dichlorophenol	4	0	ND	ND	ND	ND
Antimony	14	0	ND	ND	ND	ND
Arsenic	14	0	ND	ND	ND	ND
Barium	15	1	0.083	0.2389	0.083	CW941130SLR2B
Beryllium	14	0	ND	ND	ND	ND
Cadmium	21	1	0.0022	0.0036	0.0022	CW941129SLR13A
Chromium	31	14	0.0028	0.0182	0.0665	CW941129SLR13A
Cobalt	14	0	ND	ND	ND	ND
Copper	14	10	0.024	0.0379	0.18	CW941129SLR15A
Lead	22	5	0.0175	0.024	0.0389	CW941129SLR13A
Mercury	19	1	0.0021	0.0009	0.0021	CW941129SLR9A
Nickel	14	2	0.03	0.0172	0.031	HMH941118SLR5A
Silver	16	0	ND	ND	ND	ND
Thallium	14	0	ND	ND	ND	ND
Tin	14	0	ND	ND	ND	ND

TABLE 9-12
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Vanadium	14	0	ND	ND	ND	ND
Zinc	14	14	0.048	0.0857	0.2	CW941129SLR15A
Beta-BHC	21	0	ND	ND	ND	ND
Delta-BHC	21	0	ND	ND	ND	ND
Chlordane	2	0	ND	ND	ND	ND
Toxaphene	2	0	ND	ND	ND	ND
Endrin	2	0	ND	ND	ND	ND
Heptachlor	23	0	ND	ND	ND	ND
Heptachlor epoxide	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	23	0	ND	ND	ND	ND
Methoxychlor	23	0	ND	ND	ND	ND
Aldrin	21	0	ND	ND	ND	ND
Endosulfan I	21	0	ND	ND	ND	ND
Dieldrin	21	0	ND	ND	ND	ND
4,4'-DDE	21	0	ND	ND	ND	ND
Endosulfan II	21	0	ND	ND	ND	ND
4,4-DDT	21	0	ND	ND	ND	ND
Endrin aldehyde	21	0	ND	ND	ND	ND
Aroclor 1242	21	0	ND	ND	ND	ND
Aroclor 1254	21	0	ND	ND	ND	ND
Aroclor 1260	21	0	ND	ND	ND	ND
Vinyl acetate	3	0	ND	ND	ND	ND
Chloromethane	3	0	ND	ND	ND	ND
Bromomethane	3	0	ND	ND	ND	ND
Vinyl chloride	3	0	ND	ND	ND	ND
Chloroethane	3	0	ND	ND	ND	ND
Methylene chloride	3	0	ND	ND	ND	ND
Acetone	3	0	ND	ND	ND	ND
Carbon disulfide	3	0	ND	ND	ND	ND
1,1-Dichloroethene	3	0	ND	ND	ND	ND
1,1-Dichloroethane	3	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Chloroform	3	3	0.0016	0.0018	0.0021	CW941129SLR13A
1,2-Dichloroethane	3	0	ND	ND	ND	ND
2-Butanone	3	0	ND	ND	ND	ND
1,1,1-Trichloroethane	3	0	ND	ND	ND	ND
Carbon tetrachloride	3	0	ND	ND	ND	ND
Bromodichloromethane	3	0	ND	ND	ND	ND
1,2-Dichloropropane	3	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	3	0	ND	ND	ND	ND
Trichloroethene	3	0	ND	ND	ND	ND
Dibromochloromethane	3	0	ND	ND	ND	ND
1,1,2-Trichloroethane	3	0	ND	ND	ND	ND
Benzene	3	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	3	0	ND	ND	ND	ND
Bromoform	3	0	ND	ND	ND	ND

TABLE 9-12
ROADWAY AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Hexanone	3	0	ND	ND	ND	ND
4-Methyl-2-pentanone	3	0	ND	ND	ND	ND
Tetrachloroethene	3	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3	0	ND	ND	ND	ND
Toluene	3	0	ND	ND	ND	ND
Chlorobenzene	3	0	ND	ND	ND	ND
Ethylbenzene	3	0	ND	ND	ND	ND
Styrene	3	0	ND	ND	ND	ND
Xylenes (total)	3	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	3	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-13
UNDERGROUND TANK AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	2	0	ND	ND	ND	ND
Naphthalene	2	1	0.015	0.09	0.015	HMH94116SLT3B
2-Methylnaphthalene	2	1	0.033	0.099	0.033	HMH94116SLT3B
2,4,6-Trichlorophenol	2	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	2	0	ND	ND	ND	ND
Acenaphthene	2	0	ND	ND	ND	ND
Dibenzofuran	2	1	0.02	0.0925	0.02	HMH94116SLT3B
Diethylphthalate	2	0	ND	ND	ND	ND
Fluorene	2	1	0.02	0.0925	0.02	HMH94116SLT3B
N-Nitrosodiphenylamine	2	0	ND	ND	ND	ND
Phenanthrene	2	1	0.12	0.1425	0.12	HMH94116SLT3B
Anthracene	2	1	0.019	0.092	0.019	HMH94116SLT3B
Di-n-butylphthalate	2	2	0.03	0.065	0.1	HMH94116SLT3B
Fluoranthene	2	2	0.01	0.11	0.21	HMH94116SLT3B
Pyrene	2	2	0.012	0.086	0.16	HMH94116SLT3B
Butylbenzylphthalate	2	1	0.029	0.097	0.029	HMH94116SLT3B
Bis(2-ethylhexyl)phthalate	2	2	0.16	0.235	0.31	HMH94116SLT3B
Di-n-octylphthalate	2	0	ND	ND	ND	ND
Benzo(b)fluoranthene	2	1	0.089	0.127	0.089	HMH94116SLT3B
Benzo(k)fluoranthene	2	1	0.1	0.1325	0.1	HMH94116SLT3B
Benzo(a)pyrene	2	1	0.1	0.1325	0.1	HMH94116SLT3B
N-Nitrosodimethylamine	2	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	2	0.26	0.27	0.28	HMH941116SLT4A
Barium	2	2	23.	31.5	40.	HMH941116SLT4A
Beryllium	2	2	0.6	0.61	0.62	HMH941116SLT4A
Cadmium	2	1	1.1	0.6	1.1	HMH94116SLT3B
Chromium	2	2	14.	22.	30.	HMH94116SLT3B
Cobalt	2	2	5.4	6.5	7.6	HMH941116SLT4A
Copper	2	2	78.	94.	110.	HMH94116SLT3B
Lead	2	2	1.6	7.3	13.	HMH94116SLT3B
Mercury	2	0	ND	ND	ND	ND
Nickel	2	2	9.6	14.3	19.	HMH94116SLT3B
Silver	2	2	0.8	1.	1.2	HMH94116SLT3B
Thallium	2	0	ND	ND	ND	ND
Tin	2	0	ND	ND	ND	ND
Vanadium	2	0	ND	ND	ND	ND
Zinc	2	2	29.	56.	83.	HMH94116SLT3B
Beta-BHC	2	0	ND	ND	ND	ND
Delta-BHC	2	1	0.0011	0.001	0.0011	HMH941116SLT4A
Heptachlor	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	2	2	0.0005	0.0008	0.001	HMH941116SLT4A

TABLE 9-13
UNDERGROUND TANK AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Methoxychlor	2	0	ND	ND	ND	ND
Aldrin	2	0	ND	ND	ND	ND
Endosulfan I	2	0	ND	ND	ND	ND
Dieldrin	2	0	ND	ND	ND	ND
4,4'-DDE	2	0	ND	ND	ND	ND
Endosulfan II	2	0	ND	ND	ND	ND
4,4-DDT	2	1	0.0005	0.0011	0.0005	HMH941116SLT4A
Endrin aldehyde	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1254	2	2	0.0077	0.0144	0.021	HMH94116SLT3B
Aroclor 1260	2	0	ND	ND	ND	ND
Vinyl acetate	2	0	ND	ND	ND	ND
Chloromethane	2	0	ND	ND	ND	ND
Bromomethane	2	0	ND	ND	ND	ND
Vinyl chloride	2	0	ND	ND	ND	ND
Chloroethane	2	0	ND	ND	ND	ND
Methylene chloride	2	0	ND	ND	ND	ND
Acetone	2	2	0.013	0.0715	0.13	HMH94116SLT3B
Carbon disulfide	2	1	0.0015	0.0033	0.0015	HMH94116SLT3B
1,1-Dichloroethene	2	1	0.0005	0.0028	0.0005	HMH94116SLT3B
1,1-Dichloroethane	2	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	2	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	2	0	ND	ND	ND	ND
Chloroform	2	1	0.11	0.0575	0.11	HMH94116SLT3B
1,2-Dichloroethane	2	0	ND	ND	ND	ND
2-Butanone	2	1	0.18	0.0925	0.18	HMH94116SLT3B
1,1,1-Trichloroethane	2	1	0.0083	0.0067	0.0083	HMH94116SLT3B
Carbon tetrachloride	2	0	ND	ND	ND	ND
Bromodichloromethane	2	0	ND	ND	ND	ND
1,2-Dichloropropane	2	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	2	0	ND	ND	ND	ND
Trichloroethene	2	1	0.11	0.0575	0.11	HMH94116SLT3B
Dibromochloromethane	2	0	ND	ND	ND	ND
1,1,2-Trichloroethane	2	0	ND	ND	ND	ND
Benzene	2	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	2	0	ND	ND	ND	ND
Bromoform	2	0	ND	ND	ND	ND
2-Hexanone	2	1	0.0012	0.0031	0.0012	HMH94116SLT3B
4-Methyl-2-pentanone	2	1	0.0066	0.0058	0.0066	HMH94116SLT3B
Tetrachloroethene	2	1	0.26	0.1325	0.26	HMH94116SLT3B
1,1,2,2-Tetrachloroethane	2	0	ND	ND	ND	ND
Toluene	2	1	0.0016	0.0033	0.0016	HMH94116SLT3B
Chlorobenzene	2	1	0.0013	0.0032	0.0013	HMH94116SLT3B
Ethylbenzene	2	1	0.05	0.0275	0.05	HMH94116SLT3B

TABLE 9-13
UNDERGROUND TANK AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	2	1	0.01	0.0075	0.01	HMH94116SLT3B
Xylenes (total)	2	1	0.1	0.0525	0.1	HMH94116SLT3B
2-Chloroethyl vinyl ether	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-14
UNDERGROUND TANK AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	0	ND	ND	ND	ND
Barium	2	0	ND	ND	ND	ND
Beryllium	2	0	ND	ND	ND	ND
Cadmium	2	0	ND	ND	ND	ND
Chromium	2	0	ND	ND	ND	ND
Cobalt	2	0	ND	ND	ND	ND
Copper	2	1	0.027	0.0185	0.027	HMH9411116SLT3B
Lead	2	0	ND	ND	ND	ND
Mercury	2	0	ND	ND	ND	ND
Nickel	2	0	ND	ND	ND	ND
Silver	2	0	ND	ND	ND	ND
Thallium	2	0	ND	ND	ND	ND
Tin	2	0	ND	ND	ND	ND
Vanadium	2	0	ND	ND	ND	ND
Zinc	2	2	0.065	0.0715	0.078	HMH9411116SLT3B
Vinyl acetate	1	0	ND	ND	ND	ND
Chloromethane	1	0	ND	ND	ND	ND
Bromomethane	1	0	ND	ND	ND	ND
Vinyl chloride	1	0	ND	ND	ND	ND
Chloroethane	1	0	ND	ND	ND	ND
Methylene chloride	1	0	ND	ND	ND	ND
Acetone	1	1	0.0056	0.0056	0.0056	HMH9411116SLT3B
Carbon disulfide	1	0	ND	ND	ND	ND
1,1-Dichloroethene	1	0	ND	ND	ND	ND
1,1-Dichloroethane	1	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Chloroform	1	1	0.0022	0.0022	0.0022	HMH9411116SLT3B
1,2-Dichloroethane	1	0	ND	ND	ND	ND
2-Butanone	1	0	ND	ND	ND	ND
1,1,1-Trichloroethane	1	0	ND	ND	ND	ND
Carbon tetrachloride	1	0	ND	ND	ND	ND
Bromodichloromethane	1	0	ND	ND	ND	ND
1,2-Dichloropropane	1	0	ND	ND	ND	ND
Trans-1,3-Dichloropropen	1	0	ND	ND	ND	ND
Trichloroethene	1	0	ND	ND	ND	ND
Dibromochloromethane	1	0	ND	ND	ND	ND
1,1,2-Trichloroethane	1	0	ND	ND	ND	ND
Benzene	1	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	1	0	ND	ND	ND	ND
Bromoform	1	0	ND	ND	ND	ND
2-Hexanone	1	0	ND	ND	ND	ND
4-Methyl-2-pentanone	1	0	ND	ND	ND	ND
Tetrachloroethene	1	1	0.001	0.001	0.001	HMH9411116SLT3B
1,1,2,2-Tetrachloroethane	1	0	ND	ND	ND	ND
Toluene	1	0	ND	ND	ND	ND

TABLE 9-14
UNDERGROUND TANK AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Chlorobenzene	1	0	ND	ND	ND	ND
Ethylbenzene	1	1	0.0005	0.0005	0.0005	HMH9411116SLT3B
Styrene	1	1	0.0016	0.0016	0.0016	HMH9411116SLT3B
Xylenes (total)	1	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	1	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-15
GENERAL FACILITY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	16	0	ND	ND	ND	ND
2,4-Dichlorophenol	16	0	ND	ND	ND	ND
Naphthalene	16	3	0.01	0.1387	0.011	HMH941118SLG1B
2-Methylnaphthalene	16	2	0.028	0.1511	0.036	HMH941118SLG6B
2,4,6-Trichlorophenol	16	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	16	0	ND	ND	ND	ND
Acenaphthene	16	0	ND	ND	ND	ND
Dibenzofuran	16	1	0.015	0.1583	0.015	HMH941118SLG7B
Diethylphthalate	16	3	0.01	0.1363	0.013	HMH941118SLG1B
Fluorene	16	1	0.017	0.1584	0.017	HMH941118SLG7B
N-Nitrosodiphenylamine	16	0	ND	ND	ND	ND
Phenanthrene	16	10	0.013	0.1158	0.23	CW941129SLG8A
Anthracene	16	8	0.008	0.0924	0.048	CW941129SLG8B
Di-n-butylphthalate	16	16	0.014	0.0366	0.094	CW941129SLG8A
Fluoranthene	16	11	0.01	0.149	0.47	CW941129SLG8A
Pyrene	16	11	0.011	0.1386	0.43	CW941129SLG8A
Butylbenzylphthalate	16	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	16	16	0.038	0.1768	0.64	CW941129SLG8A
Di-n-octylphthalate	16	3	0.021	0.1428	0.073	CW941129SLG8A
Benzo(b)fluoranthene	16	8	0.017	0.1313	0.28	CW941129SLG8A
Benzo(k)fluoranthene	16	8	0.022	0.1274	0.21	CW941129SLG8A
Benzo(a)pyrene	16	9	0.018	0.1191	0.19	CW941129SLG8A
N-Nitrosodimethylamine	16	0	ND	ND	ND	ND
2,6-Dichlorophenol	16	0	ND	ND	ND	ND
Antimony	16	0	ND	ND	ND	ND
Arsenic	16	15	0.18	0.9256	2.1	CW941129SLG9A
Barium	16	16	21.	46.9	80.	HMH941118SLG4B
Beryllium	16	9	0.5	0.4828	1.	HMH941118SLG6A
Cadmium	16	11	0.46	1.2197	5.6	HMH941118SLG6A
Chromium	16	16	5.2	76.6313	300.	HMH941118SLG7A
Cobalt	16	16	3.7	7.8813	14.	HMH941118SLG1A
Copper	16	16	14.	221.8438	1000.	HMH941118SLG7A
Lead	16	12	4.8	27.2938	134.	CW941129SLG9A
Mercury	16	4	0.022	0.0268	0.047	HMH941118SLG6A
Nickel	16	16	1.	52.9625	280.	HMH941118SLG7A
Selenium	4	3	0.22	0.355	0.56	CW941129SLG9A
Silver	16	11	0.6	2.4181	19.3	CW941129SLG8A
Thallium	16	3	0.3	3.0738	0.44	CW941129SLG8A
Tin	16	1	20.	7.1406	20.	HMH941118SLG1A
Vanadium	16	10	12.8	22.0813	48.	HMH941118SLG7A
Zinc	16	16	13.	208.525	1600.	HMH941118SLG7A
Beta-BHC	16	0	ND	ND	ND	ND
Delta-BHC	16	0	ND	ND	ND	ND
Heptachlor	16	0	ND	ND	ND	ND

TABLE 9-15
GENERAL FACILITY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Gamma-BHC (Lindane)	16	5	0.0002	0.0008	0.0006	HMH941118SLG6A
Methoxychlor	16	1	0.0048	0.0089	0.0048	HMH941118SLG1B
Aldrin	16	0	ND	ND	ND	ND
Endosulfan I	16	0	ND	ND	ND	ND
Dieldrin	16	1	0.0003	0.0017	0.0003	HMH941118SLG4B
4,4'-DDE	16	3	0.0046	0.0053	0.052	CW941129SLG9A
Endosulfan II	16	0	ND	ND	ND	ND
4,4-DDT	16	7	0.0006	0.0046	0.046	CW941129SLG9A
Endrin aldehyde	16	0	ND	ND	ND	ND
Aroclor 1242	16	0	ND	ND	ND	ND
Aroclor 1254	16	6	0.016	0.0306	0.13	CW941129SLG8A
Aroclor 1260	16	1	0.055	0.0199	0.055	CW941129SLG8A
Vinyl acetate	17	0	ND	ND	ND	ND
Chloromethane	17	0	ND	ND	ND	ND
Bromomethane	17	0	ND	ND	ND	ND
Vinyl chloride	17	0	ND	ND	ND	ND
Chloroethane	17	0	ND	ND	ND	ND
Methylene chloride	17	3	0.0018	0.0061	0.028	CW941129SLG8C
Acetone	17	16	0.0052	0.0102	0.022	HMH941118SLG6B
Carbon disulfide	17	0	ND	ND	ND	ND
1,1-Dichloroethene	17	0	ND	ND	ND	ND
1,1-Dichloroethane	17	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	17	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	17	2	0.0005	0.0045	0.0007	CW941129SLG8B
Chloroform	17	17	0.0006	0.003	0.005	CW941129SLG9B
1,2-Dichloroethane	17	0	ND	ND	ND	ND
2-Butanone	17	4	0.0034	0.005	0.0065	HMH941118SLG6A
1,1,1-Trichloroethane	17	0	ND	ND	ND	ND
Carbon tetrachloride	17	0	ND	ND	ND	ND
Bromodichloromethane	17	0	ND	ND	ND	ND
1,2-Dichloropropane	17	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	17	0	ND	ND	ND	ND
Trichloroethene	17	4	0.0021	0.0046	0.0052	CW941129SLG9A
Dibromochloromethane	17	0	ND	ND	ND	ND
1,1,2-Trichloroethane	17	0	ND	ND	ND	ND
Benzene	17	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	17	0	ND	ND	ND	ND
Bromoform	17	0	ND	ND	ND	ND
2-Hexanone	17	0	ND	ND	ND	ND
4-Methyl-2-pentanone	17	3	0.0013	0.0045	0.0033	CW941129SLG8C
Tetrachloroethene	17	9	0.0009	0.0033	0.0045	CW941129SLG9A
1,1,2,2-Tetrachloroethane	17	0	ND	ND	ND	ND
Toluene	17	6	0.0006	0.0069	0.018	CW941129SLG8C
Chlorobenzene	17	0	ND	ND	ND	ND

TABLE 9-15
GENERAL FACILITY AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Ethylbenzene	17	4	0.0005	0.0042	0.0046	CW941129SLG9A
Styrene	17	0	ND	ND	ND	ND
Xylenes (total)	17	9	0.0007	0.0045	0.018	CW941129SLG9A
2-Chloroethyl vinyl ether	17	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-16
GENERAL FACILITY AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Fluoranthene	1	0	ND	ND	ND	ND
Pyrene	1	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	1	1	0.001	0.001	0.001	HMH941118SLG7B
Antimony	12	0	ND	ND	ND	ND
Arsenic	13	0	ND	ND	ND	ND
Barium	13	2	0.129	0.2607	0.51	HMH941118SLG1B
Beryllium	12	0	ND	ND	ND	ND
Cadmium	13	0	ND	ND	ND	ND
Chromium	17	4	0.0021	0.0147	0.0028	CW941129SLG9A
Cobalt	12	0	ND	ND	ND	ND
Copper	12	3	0.033	0.0164	0.04	HMH941118SLG1B
Lead	15	1	0.019	0.0264	0.019	CW941129SLG9A
Mercury	14	0	ND	ND	ND	ND
Nickel	12	1	0.03	0.0163	0.03	HMH941118SLG7B
Selenium	1	0	ND	ND	ND	ND
Silver	13	0	ND	ND	ND	ND
Thallium	12	0	ND	ND	ND	ND
Tin	12	0	ND	ND	ND	ND
Vanadium	12	0	ND	ND	ND	ND
Zinc	12	11	0.023	0.0433	0.11	HMH941118SLG1B
Beta-BHC	5	0	ND	ND	ND	ND
Delta-BHC	5	0	ND	ND	ND	ND
Heptachlor	5	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	5	0	ND	ND	ND	ND
Methoxychlor	5	0	ND	ND	ND	ND
Aldrin	5	0	ND	ND	ND	ND
Endosulfan I	5	0	ND	ND	ND	ND
Dieldrin	5	0	ND	ND	ND	ND
4,4'-DDE	5	0	ND	ND	ND	ND
Endosulfan II	5	0	ND	ND	ND	ND
4,4-DDT	5	0	ND	ND	ND	ND
Endrin aldehyde	5	0	ND	ND	ND	ND
Aroclor 1242	5	0	ND	ND	ND	ND
Aroclor 1254	5	0	ND	ND	ND	ND
Aroclor 1260	5	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-17
PERIMETER AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	19	0	ND	ND	ND	ND
2,4-Dichlorophenol	19	0	ND	ND	ND	ND
Naphthalene	19	1	0.02	0.1845	0.02	CW941202SLP6A
2-Methylnaphthalene	19	1	0.052	0.1862	0.052	CW941202SLP6A
2,4,6-Trichlorophenol	19	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	19	0	ND	ND	ND	ND
Acenaphthene	19	1	0.042	0.1856	0.042	CW941202SLP6A
Dibenzofuran	19	1	0.048	0.1859	0.048	CW941202SLP6A
Diethylphthalate	19	2	0.01	0.1742	0.014	CW941202SLP8A
Fluorene	19	3	0.019	0.1556	0.055	CW941202SLP6A
N-Nitrosodiphenylamine	19	0	ND	ND	ND	ND
Phenanthrene	19	15	0.01	0.1867	1.5	CW941201SLP1A
Anthracene	19	9	0.016	0.1224	0.31	CW941201SLP1A
Di-n-butylphthalate	19	19	0.013	0.0259	0.046	CW941202SLP6A
Fluoranthene	19	19	0.01	0.3512	3.8	CW941201SLP1A
Pyrene	19	19	0.012	0.3535	3.9	CW941201SLP1A
Butylbenzylphthalate	19	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	19	17	0.017	0.1292	0.31	CW941202SLP6A
Di-n-octylphthalate	19	16	0.006	0.0489	0.062	CW941202SLP6A
Benzo(b)fluoranthene	19	19	0.005	0.1576	1.4	CW941201SLP1A
Benzo(k)fluoranthene	19	19	0.004	0.1537	1.6	CW941201SLP1A
Benzo(a)pyrene	19	16	0.012	0.1769	1.5	CW941201SLP1A
N-Nitrosodimethylamine	19	0	ND	ND	ND	ND
2,6-Dichlorophenol	19	0	ND	ND	ND	ND
Antimony	17	1	9.4	4.5971	9.4	CW941202SLP6A
Arsenic	17	15	0.43	1.3112	3.	CW941201SLP1B
Barium	17	17	22.9	55.2647	86.9	CW941201SLP1B
Beryllium	17	8	0.35	0.5821	2.	CW941202SLP8A
Cadmium	17	12	0.46	2.0385	5.6	CW941202SLP8B
Chromium	17	17	8.5	106.9824	310.	CW941202SLP8B
Cobalt	15	15	3.3	5.7467	10.	CW941202SLP8B
Copper	17	17	13.4	253.5647	739.	CW941202SLP8B
Lead	17	17	3.6	25.9353	88.2	CW941201SLP1B
Mercury	17	1	0.41	0.0711	0.41	CW941201SLP1B
Nickel	17	17	6.3	63.5059	213.	CW941202SLP8B
Selenium	17	3	0.3	0.1647	0.52	CW941201SLP5B
Silver	17	8	1.2	1.3259	3.5	CW941202SLP8B
Thallium	17	10	0.	0.2771	0.9	CW941201SLP2B
Tin	17	2	3.3	1.6882	3.3	3.5
Vanadium	17	17	9.8	23.0529	35.2	3.3
Zinc	17	17	28.6	202.1706	516.	3.3
Beta-BHC	18	0	ND	ND	ND	ND
Delta-BHC	18	2	0.0004	0.0008	0.0004	CW941202SLP9B
Heptachlor	18	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	18	2	0.0001	0.0008	0.0001	CW941202SLP9B
Methoxychlor	19	0	ND	ND	ND	ND
Aldrin	18	0	ND	ND	ND	ND
Endosulfan I	18	0	ND	ND	ND	ND
Dieldrin	19	0	ND	ND	ND	ND

TABLE 9-17
PERIMETER AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
4,4'-DDE	19	9	0.0003	0.0021	0.0053	CW941201SLP1B
Endosulfan II	19	0	ND	ND	ND	ND
4,4-DDT	19	15	0.0005	0.0026	0.014	CW941201SLP1A
Endrin aldehyde	19	0	ND	ND	ND	ND
Aroclor 1242	19	0	ND	ND	ND	ND
Aroclor 1254	19	12	0.0046	0.0243	0.077	3.3
Aroclor 1260	19	5	0.023	0.0216	0.068	CW941202SLP6B
Vinyl acetate	24	0	ND	ND	ND	ND
Chloromethane	24	0	ND	ND	ND	ND
Bromomethane	24	0	ND	ND	ND	ND
Vinyl chloride	24	0	ND	ND	ND	ND
Chloroethane	24	0	ND	ND	ND	ND
Methylene chloride	24	24	0.0014	0.0041	0.012	CW941202SLP7A
Acetone	24	22	0.0019	0.0088	0.026	CW941201SLP1C
Carbon disulfide	24	1	0.0012	0.0048	0.0012	CW941201SLP5A
1,1-Dichloroethene	24	0	ND	ND	ND	ND
1,1-Dichloroethane	24	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	24	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	24	3	0.0005	0.0045	0.0012	CW941202SLP6A
Chloroform	24	24	0.0027	0.0046	0.006	CW941202SLP6B
1,2-Dichloroethane	24	0	ND	ND	ND	ND
2-Butanone	24	5	0.002	0.0046	0.0043	CW941202SLP6A
1,1,1-Trichloroethane	24	0	ND	ND	ND	ND
Carbon tetrachloride	24	1	0.0027	0.0049	0.0027	CW941202SLP8A
Bromodichloromethane	24	0	ND	ND	ND	ND
1,2-Dichloropropane	24	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	24	0	ND	ND	ND	ND
Trichloroethene	24	11	0.0007	0.0034	0.0031	CW941202SLP6A
Dibromochloromethane	24	0	ND	ND	ND	ND
1,1,2-Trichloroethane	24	0	ND	ND	ND	ND
Benzene	24	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	24	0	ND	ND	ND	ND
Bromoform	24	0	ND	ND	ND	ND
2-Hexanone	24	0	ND	ND	ND	ND
4-Methyl-2-pentanone	24	12	0.0005	0.0042	0.0077	CW941202SLP8C
Tetrachloroethene	24	16	0.0006	0.0028	0.0038	CW941201SLP1B
1,1,2,2-Tetrachloroethane	24	0	ND	ND	ND	ND
Toluene	24	21	0.0005	0.0059	0.019	CW941202SLP6A
Chlorobenzene	24	0	ND	ND	ND	ND
Ethylbenzene	24	16	0.0006	0.0032	0.0045	CW941202SLP6A
Styrene	24	3	0.0006	0.0046	0.0031	CW941201SLP5B
Xylenes (total)	24	18	0.0017	0.0069	0.016	CW941202SLP7B
2-Chloroethyl vinyl ether	24	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-18
PERIMETER AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	2	0	ND	ND	ND	ND
Naphthalene	2	0	ND	ND	ND	ND
2-Methylnaphthalene	2	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	2	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	2	0	ND	ND	ND	ND
Acenaphthene	2	0	ND	ND	ND	ND
Dibenzofuran	2	0	ND	ND	ND	ND
Diethylphthalate	2	0	ND	ND	ND	ND
Fluorene	2	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	2	0	ND	ND	ND	ND
Phenanthrene	2	0	ND	ND	ND	ND
Anthracene	2	0	ND	ND	ND	ND
Di-n-butylphthalate	2	2	0.0006	0.0007	0.0007	CW941201SLP1B
Fluoranthene	2	0	ND	ND	ND	ND
Pyrene	2	0	ND	ND	ND	ND
Butylbenzylphthalate	2	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	2	2	0.001	0.002	0.003	CW941201SLP1A
Di-n-octylphthalate	2	0	ND	ND	ND	ND
Benzo(b)fluoranthene	2	0	ND	ND	ND	ND
Benzo(k)fluoranthene	2	0	ND	ND	ND	ND
Benzo(a)pyrene	2	0	ND	ND	ND	ND
N-Nitrosodimethylamine	2	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Barium	10	10	0.0458	0.1079	0.162	CW941202SLP7A
Cadmium	8	0	ND	ND	ND	ND
Chromium	17	14	0.0034	0.2591	4.4	CW941202SLP7B
Lead	9	0	ND	ND	ND	ND
Mercury	1	0	ND	ND	ND	ND
Silver	6	0	ND	ND	ND	ND
Beta-BHC	6	0	ND	ND	ND	ND
Delta-BHC	6	0	ND	ND	ND	ND
Heptachlor	6	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	6	0	ND	ND	ND	ND
Methoxychlor	6	0	ND	ND	ND	ND
Aldrin	6	0	ND	ND	ND	ND
Endosulfan I	6	0	ND	ND	ND	ND
Dieldrin	6	0	ND	ND	ND	ND
4,4'-DDE	6	0	ND	ND	ND	ND
Endosulfan II	6	0	ND	ND	ND	ND
4,4-DDT	6	0	ND	ND	ND	ND

TABLE 9-18
PERIMETER AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endrin aldehyde	6	0	ND	ND	ND	ND
Aroclor 1242	6	0	ND	ND	ND	ND
Aroclor 1254	6	0	ND	ND	ND	ND
Aroclor 1260	6	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-19
WASTEWATER SPILL AREA DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Silver	41	9	12.	10.7073	62.	HOLE #7
Aluminum	41	40	5000.	9926.8293	85000.	HOLE #7
Barium	41	0	ND	ND	ND	ND
Calcium	41	41	600.	1457.561	3000.	HOLE #14
Cadmium	41	0	ND	ND	ND	ND
Cobalt	41	0	ND	ND	ND	ND
Hexavalent Chromium	41	0	ND	ND	ND	ND
Chromium	41	33	20.	31.7317	110.	HOLE #7
Copper	41	41	11.	71.8537	290.	HOLE #11
Iron	41	41	7600.	12790.2439	19000.	HOLE #13
Mercury	41	2	0.52	0.2798	1.2	HOLE #11
Potassium	41	41	450.	1961.7073	6600.	HOLE #14
Magnesium	41	41	1700.	3443.9024	8000.	HOLE #14
Manganese	41	41	120.	265.3659	380.	HOLE #1
Sodium	41	41	34.	62.5366	140.	HOLE #15
Nickel	41	41	9.	15.3902	31.	HOLE #7
Lead	41	23	10.	14.6098	87.	HOLE #11
Antimony	41	0	ND	ND	ND	ND
Tin	41	0	ND	ND	ND	ND
Titanium	41	41	310.	805.122	8800.	HOLE #5
Zinc	41	41	27.	87.9024	230.	HOLE #11
Ammonia	41	9	1.	0.8195	5.4	BACKGRD.#1
Nitrite-N	41	1	0.74	0.262	0.74	HOLE #1
Nitrate-N	41	39	0.55	1.1515	3.1	HOLE #11
pH	41	41	5.	5.961	7.5	HOLE #18
Sulfate	41	1	64.	25.9512	64.	HOLE #9

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. *Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that* exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-20
BACKGROUND AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	8	0	ND	ND	ND	ND
2,4-Dichlorophenol	8	0	ND	ND	ND	ND
Naphthalene	8	0	ND	ND	ND	ND
2-Methylnaphthalene	8	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	8	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	8	0	ND	ND	ND	ND
Acenaphthene	8	0	ND	ND	ND	ND
Dibenzofuran	8	0	ND	ND	ND	ND
Diethylphthalate	8	2	0.006	0.1324	0.01	HMH941129SLB8A
Fluorene	8	1	0.008	0.1553	0.008	HMH941129SLB2A
N-Nitrosodiphenylamine	8	0	ND	ND	ND	ND
Phenanthrene	8	8	0.013	0.1178	0.32	HMH941129SLB5A
Anthracene	8	6	0.015	0.0672	0.066	HMH941129SLB5A
Di-n-butylphthalate	8	8	0.011	0.0223	0.043	HMH941129SLB6A
Fluoranthene	8	8	0.032	0.2599	0.69	HMH941129SLB5A
Pyrene	8	8	0.025	0.233	0.69	HMH941129SLB5A
Butylbenzylphthalate	8	1	0.015	0.1562	0.015	HMH941129SLB4A
Bis(2-ethylhexyl)phthalate	8	8	0.025	0.0664	0.13	HMH941129SLB6A
Di-n-octylphthalate	8	0	ND	ND	ND	ND
Benzo(b)fluoranthene	8	8	0.014	0.1343	0.4	HMH941129SLB5A
Benzo(k)fluoranthene	8	8	0.018	0.135	0.42	HMH941129SLB5A
Benzo(a)pyrene	8	8	0.017	0.123	0.34	HMH941129SLB5A
N-Nitrosodimethylamine	8	0	ND	ND	ND	ND
2,6-Dichlorophenol	8	0	ND	ND	ND	ND
Antimony	8	0	ND	ND	ND	ND
Arsenic	8	8	0.32	0.95	1.3	HMH941129SLB7A
Barium	8	8	37.	59.25	88.	HMH941129SLB3A
Beryllium	8	4	0.4	0.5025	1.4	HMH941129SLB8A
Cadmium	8	4	0.24	0.605	2.5	HMH941129SLB6A
Chromium	8	8	10.	48.5	170.	HMH941129SLB6A
Cobalt	8	8	5.6	7.95	10.	HMH941129SLB1A
Copper	8	8	15.	99.25	370.	HMH941129SLB6A
Lead	8	8	6.8	30.375	140.	HMH941129SLB5A
Mercury	8	4	0.023	0.0279	0.038	HMH941129SLB5A
Nickel	8	8	10.	25.875	76.	HMH941129SLB6A
Silver	8	5	0.6	0.9875	2.8	HMH941129SLB6A
Thallium	8	0	ND	ND	ND	ND
Tin	8	0	ND	ND	ND	ND
Vanadium	8	5	26.	22.	31.	HMH941129SLB3A
Zinc	8	8	36.	87.5	270.	HMH941129SLB6A
Beta-BHC	8	0	ND	ND	ND	ND
Delta-BHC	8	0	ND	ND	ND	ND
Heptachlor	8	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	8	1	0.0002	0.0008	0.0002	HMH941129SLB1A

TABLE 9-20
BACKGROUND AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Methoxychlor	8	0	ND	ND	ND	ND
Aldrin	8	0	ND	ND	ND	ND
Endosulfan I	8	0	ND	ND	ND	ND
Dieldrin	8	1	0.001	0.0016	0.001	HMH941129SLB6A
4,4'-DDE	8	2	0.0003	0.0016	0.0022	HMH941129SLB1A
Endosulfan II	8	0	ND	ND	ND	ND
4,4-DDT	8	5	0.0017	0.0032	0.008	HMH941129SLB6A
Endrin aldehyde	8	0	ND	ND	ND	ND
Aroclor 1242	8	0	ND	ND	ND	ND
Aroclor 1254	8	3	0.014	0.0284	0.07	HMH941129SLB5A
Aroclor 1260	8	0	ND	ND	ND	ND
Vinyl acetate	8	0	ND	ND	ND	ND
Chloromethane	8	0	ND	ND	ND	ND
Bromomethane	8	0	ND	ND	ND	ND
Vinyl chloride	8	0	ND	ND	ND	ND
Chloroethane	8	0	ND	ND	ND	ND
Methylene chloride	8	2	0.011	0.0069	0.014	HMH941129SLB3A
Acetone	8	8	0.0053	0.0071	0.0094	HMH941129SLB1A
Carbon disulfide	8	0	ND	ND	ND	ND
1,1-Dichloroethene	8	0	ND	ND	ND	ND
1,1-Dichloroethane	8	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	8	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	8	0	ND	ND	ND	ND
Chloroform	8	8	0.0022	0.0052	0.019	HMH941129SLB1A
1,2-Dichloroethane	8	0	ND	ND	ND	ND
2-Butanone	8	0	ND	ND	ND	ND
1,1,1-Trichloroethane	8	5	0.0004	0.0025	0.0019	HMH941129SLB5A
Carbon tetrachloride	8	0	ND	ND	ND	ND
Bromodichloromethane	8	1	0.0015	0.0046	0.0015	HMH941129SLB1A
1,2-Dichloropropane	8	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	8	0	ND	ND	ND	ND
Trichloroethene	8	4	0.0005	0.0028	0.0011	HMH941129SLB5A
Dibromochloromethane	8	0	ND	ND	ND	ND
1,1,2-Trichloroethane	8	0	ND	ND	ND	ND
Benzene	8	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	8	0	ND	ND	ND	ND
Bromoform	8	0	ND	ND	ND	ND
2-Hexanone	8	0	ND	ND	ND	ND
4-Methyl-2-pentanone	8	0	ND	ND	ND	ND
Tetrachloroethene	8	6	0.0005	0.0019	0.0014	HMH941129SLB5A
1,1,2,2-Tetrachloroethane	8	0	ND	ND	ND	ND
Toluene	8	5	0.0012	0.0035	0.004	HMH941129SLB6A
Chlorobenzene	8	0	ND	ND	ND	ND
Ethylbenzene	8	0	ND	ND	ND	ND

TABLE 9-20
BACKGROUND AOC SOILS ANALYTICAL DATA SUMMARY (Total)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	8	0	ND	ND	ND	ND
Xylenes (total)	8	6	0.0007	0.0021	0.0019	HMH941129SLB2A
2-Chloroethyl vinyl ether	8	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-21
BACKGROUND AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	1	0	ND	ND	ND	ND
2,4-Dichlorophenol	1	0	ND	ND	ND	ND
Naphthalene	1	0	ND	ND	ND	ND
2-Methylnaphthalene	1	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	1	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	1	0	ND	ND	ND	ND
Acenaphthene	1	0	ND	ND	ND	ND
Dibenzofuran	1	0	ND	ND	ND	ND
Diethylphthalate	1	0	ND	ND	ND	ND
Fluorene	1	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	1	0	ND	ND	ND	ND
Phenanthrene	1	0	ND	ND	ND	ND
Anthracene	1	0	ND	ND	ND	ND
Di-n-butylphthalate	1	1	0.0009	0.0009	0.0009	HMH941129SLB5A
Fluoranthene	1	0	ND	ND	ND	ND
Pyrene	1	0	ND	ND	ND	ND
Butylbenzylphthalate	1	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	1	0	ND	ND	ND	ND
Di-n-octylphthalate	1	0	ND	ND	ND	ND
Benzo(b)fluoranthene	1	0	ND	ND	ND	ND
Benzo(k)fluoranthene	1	0	ND	ND	ND	ND
Benzo(a)pyrene	1	0	ND	ND	ND	ND
N-Nitrosodimethylamine	1	0	ND	ND	ND	ND
2,6-Dichlorophenol	1	0	ND	ND	ND	ND
Antimony	8	0	ND	ND	ND	ND
Arsenic	8	0	ND	ND	ND	ND
Barium	8	0	ND	ND	ND	ND
Beryllium	8	0	ND	ND	ND	ND
Cadmium	8	0	ND	ND	ND	ND
Chromium	8	0	ND	ND	ND	ND
Cobalt	8	0	ND	ND	ND	ND
Copper	8	2	0.032	0.0199	0.067	HMH941129SLB8A
Lead	8	0	ND	ND	ND	ND
Mercury	8	0	ND	ND	ND	ND
Nickel	8	0	ND	ND	ND	ND
Silver	8	0	ND	ND	ND	ND
Thallium	8	0	ND	ND	ND	ND
Tin	8	0	ND	ND	ND	ND
Vanadium	8	0	ND	ND	ND	ND
Zinc	8	8	0.052	0.0954	0.18	HMH941129SLB5A
Beta-BHC	2	0	ND	ND	ND	ND
Delta-BHC	2	0	ND	ND	ND	ND
Heptachlor	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	2	0	ND	ND	ND	ND
Methoxychlor	2	0	ND	ND	ND	ND
Aldrin	2	0	ND	ND	ND	ND
Endosulfan I	2	0	ND	ND	ND	ND

TABLE 9-21
BACKGROUND AOC SOILS ANALYTICAL DATA SUMMARY (Leach Procedure)
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Dieldrin	2	0	ND	ND	ND	ND
4,4'-DDE	2	0	ND	ND	ND	ND
Endosulfan II	2	0	ND	ND	ND	ND
4,4-DDT	2	0	ND	ND	ND	ND
Endrin aldehyde	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1254	2	0	ND	ND	ND	ND
Aroclor 1260	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Beta-BHC	80	4	0.	0.0023	0.0004	MW 31D (TOTAL)
Delta-BHC	80	2	0.	0.0023	0.0001	MW-56D
Gamma-BHC (Lindane)	80	1	0.0001	0.0023	0.0001	MW 44D (TOTAL)
Heptaclor	80	9	0.	0.0023	0.0002	MW 52D (TOTAL)
Aldrin	80	3	0.	0.0023	0.	N
Heptaclor epoxide	41	1	0.	0.0044	0.	MW-56D
Endosulfan I	80	1	0.	0.0023	0.	0.000099
Dieldrin	80	7	0.	0.0023	0.0013	MW 44S (TOTAL)
4,4'-DDE	80	1	0.	0.0023	0.	MW 30 (TOTAL)
Endrin	41	0	ND	ND	ND	ND
Endosulfan II	79	2	0.0001	0.0023	0.0002	MW 61S (TOTAL)
4,4'-DDD	41	0	ND	ND	ND	ND
Endosulfan sulfate	41	2	0.	0.0044	0.0001	MW-53D
4,4-DDT	80	1	0.0001	0.0023	0.0001	MW-56D
Methoxychlor	44	3	0.0002	0.0002	0.0004	MW 31D (TOTAL)
Endrin ketone	5	0	ND	ND	ND	ND
Endrin aldehyde	80	1	0.0002	0.0023	0.0002	MW 31 (TOTAL)
Alpha Chlordane	5	0	ND	ND	ND	ND
Gamma Chlordane	5	0	ND	ND	ND	ND
Tetrachloro-m-xylene	44	44	0.0001	0.0002	0.0003	MW61D (TOTAL)
Decachlorobiphenyl	44	44	0.	0.0001	0.0003	MW-44B
Chlordane	41	0	ND	ND	ND	ND
Toxaphene	41	0	ND	ND	ND	ND
Aroclor 1016	41	0	ND	ND	ND	ND
Aroclor 1221	41	0	ND	ND	ND	ND
Aroclor 1232	41	0	ND	ND	ND	ND
Aroclor 1242	80	0	ND	ND	ND	ND
Aroclor 1248	41	0	ND	ND	ND	ND
Aroclor 1254	80	1	0.0038	0.0566	0.0038	MW 31D (TOTAL)
Aroclor 1260	41	0	ND	ND	ND	ND
Chloromethane	91	0	ND	ND	ND	ND
Bromomethane	91	0	ND	ND	ND	ND
Vinyl chloride	91	24	0.0019	0.0295	0.61	MW-31
Chloroethane	91	0	ND	ND	ND	ND
Methylene chloride	81	14	0.0005	0.0051	0.046	MW-31
Acetone	73	9	0.0013	0.0376	2.4	MW 31 (TOTAL)
Carbon disulfide	79	0	ND	ND	ND	ND
1,1-Dichloroethene	91	12	0.0004	0.0058	0.0093	MW-30
1,1-Dichloroethane	91	4	0.0006	0.0059	0.001	MW-30
Trans-1,2-Dichloroethene	90	10	0.0008	0.0065	0.053	MW-31
Cis-1,2-Dichloroethene	78	49	0.0007	0.162	2.4	MW-30
Chloroform	84	23	0.0006	0.0069	0.039	MW-44B
1,2-Dichloroethane	91	25	0.0006	0.0097	0.3	MW-31
2-Butanone	79	2	0.56	0.0993	6.9	MW 31 (TOTAL)
1,1,1-Trichloroethane	91	19	0.0006	0.0061	0.023	MW-44B
Carbon tetrachloride	91	0	ND	ND	ND	ND

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Bromodichloromethane	91	3	0.0009	0.0059	0.0034	MW-58D
1,2-Dichloropropane	91	3	0.0009	0.0059	0.0011	MW-30
Cis-1,3-dichloropropene	91	0	ND	ND	ND	ND
Trichloroethene	91	58	0.0003	0.0525	0.74	MW-30
Dibromochloromethane	91	0	ND	ND	ND	ND
1,1,2-Trichloroethane	91	3	0.0006	0.0061	0.021	MW-30
Benzene	91	16	0.0006	0.008	0.2	MW-31
Trans-1,3-dichloropropene	91	0	ND	ND	ND	ND
Bromoform	91	0	ND	ND	ND	ND
4-Methyl-2-pentanone	79	4	0.001	0.0782	4.	MW-31
2-Hexanone	79	1	0.0014	0.0062	0.0014	MW-30
Tetrachloroethene	91	57	0.0007	0.0265	0.33	MW 31D (TOTAL)
1,1,2,2-Tetrachloroethane	91	0	ND	ND	ND	ND
Toluene	91	3	2.5	0.3257	20.	MW-31
Chlorobenzene	91	0	ND	ND	ND	ND
Ethylbenzene	91	3	0.93	0.0898	4.9	MW-31
Styrene	79	0	ND	ND	ND	ND
Xylenes (total)	79	14	0.0007	0.0942	5.	MW 31 (TOTAL)
Phenol	56	1	0.025	0.0054	0.025	MW 31 (TOTAL)
Bis(2-chloroethyl)ether	57	0	ND	ND	ND	ND
2-Chlorophenol	57	2	0.0003	0.0049	0.0012	MW-52D
1,3-Dichlorobenzene	68	0	ND	ND	ND	ND
1,4-Dichlorobenzene	68	0	ND	ND	ND	ND
1,2-Dichlorobenzene	68	1	0.0024	0.005	0.0024	MW-31
2-Methylphenol	1	0	ND	ND	ND	ND
4-Methylphenol	1	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	57	0	ND	ND	ND	ND
Hexachloroethane	57	0	ND	ND	ND	ND
Nitrobenzene	56	0	ND	ND	ND	ND
Isophorone	57	0	ND	ND	ND	ND
2-Nitrophenol	53	0	ND	ND	ND	ND
2,4-Dimethylphenol	57	2	0.059	0.007	0.066	MW 31 (TOTAL)
Bis(2-chloroethoxy)methane	57	0	ND	ND	ND	ND
2,4-Dichlorophenol	57	13	0.0012	0.0558	1.4	MW-52D (TOTAL)
1,2,4-Trichlorobenzene	56	0	ND	ND	ND	ND
Naphthalene	57	6	0.0003	0.006	0.044	MW 31 (TOTAL)
4-Chloroaniline	1	0	ND	ND	ND	ND
Hexachlorobutadiene	56	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	53	2	0.004	0.0097	0.0043	MW 30 (TOTAL)
2-Methylnaphthalene	20	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	57	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	57	5	0.0006	0.0079	0.183	MW-52D
2,4,5-Trichlorophenol	21	8	0.012	0.0198	0.17	MW-52D (TOTAL)
2-Chloronaphthalene	20	0	ND	ND	ND	ND
2-Nitroaniline	1	0	ND	ND	ND	ND
Dimethylphthalate	56	1	0.0059	0.005	0.0059	MW-31B

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Acenaphthylene	57	0	ND	ND	ND	ND
2,6-Dinitrotoluene	57	0	ND	ND	ND	ND
3-Nitroaniline	1	0	ND	ND	ND	ND
Acenaphthene	57	1	0.18		0.18	MW-30
2,4-Dinitrophenol	57	0	ND	ND	ND	ND
4-Nitrophenol	53	0	ND	ND	ND	ND
Dibenzofuran	21	0	ND	ND	ND	ND
2,4-Dinitrotoluene	57	0	ND	ND	ND	ND
Diethylphthalate	56	3	0.0013	0.0047	0.0041	MW-31
4-Chlorophenyl phenyl ether	57	0	ND	ND	ND	ND
Fluorene	57	0	ND	ND	ND	ND
4-Nitroaniline	1	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	55	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	57	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	55	0	ND	ND	ND	ND
Hexachlorobenzene	57	0	ND	ND	ND	ND
Pentachlorophenol	57	1	0.001	0.0244	0.001	MW 43D (TOTAL)
Phenanthrene	57	2	0.0002	0.0049	0.0025	MW-63
Anthracene	57	0	ND	ND	ND	ND
Carbazole	1	0	ND	ND	ND	ND
Di-n-butylphthalate	54	22	0.0004	0.0042	0.031	MW-31
Fluoranthene	57	1	0.0036	0.005	0.0036	MW-63
Pyrene	55	0	ND	ND	ND	ND
Benzylbutylphthalate	57	8	0.0006	0.0051	0.02	MW 41B (TOTAL)
3,3'-Dichlorobenzidine	57	0	ND	ND	ND	ND
Benzo(a)anthracene	57	0	ND	ND	ND	ND
Chrysene	57	1	0.0016	0.005	0.0016	MW-63
Bis(2-ethylhexyl)phthalate	57	30	0.0008	0.0158	0.16	MW 41B (TOTAL)
Di-n-octylphthalate	57	1	0.0019	0.0049	0.0019	MW-43S
Benzo(b)fluoranthene	57	0	ND	ND	ND	ND
Benzo(k)fluoranthene	57	0	ND	ND	ND	ND
Benzo(a)pyrene	57	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	57	0	ND	ND	ND	ND
Dibenzo(a,h)anthracene	57	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	57	0	ND	ND	ND	ND
Antimony	78	0	ND	ND	ND	ND
Arsenic	78	33	0.0017	0.0101	0.065	MW-31D
Barium	90	16	0.0722	0.4112	2.	MW-60
Beryllium	78	1	0.041	0.0103	0.041	MW-43D
Cadmium	90	15	0.0061	0.0093	0.11	MW-56D
Calcium	76	75	0.6	125.0586	480.	MW-44B
Chromium	90	30	0.04	0.0865	0.6	MW-63
Copper	87	73	0.02	0.4415	9.7	MW-43D
Cyanide	1	0	ND	ND	ND	ND
Iron	88	80	0.05	53.5666	530.	MW-60

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Lead	78	14	0.06	0.0505	0.3	MW-63
Magnesium	76	76	0.29	95.4499	690.	MW 31D (TOTAL)
Manganese	88	86	0.02	3.4425	20.	MW 53D (TOTAL)
Mercury	78	1	0.0014	0.0012	0.0014	MW 51D (TOTAL)
Nickel	89	65	0.03	0.2575	2.3	MW-43D
Potassium	76	76	3.5	18.2447	64.	MW 31D (TOTAL)
Selenium	41	0	ND	ND	ND	ND
Silver	78	4	0.03	0.0176	0.05	MW-57
Sodium	88	88	9.4	172.5159	970.	MW-30
Thallium	78	0	ND	ND	ND	ND
Zinc	88	88	0.019	0.8629	10.	MW-43D
Ethyl Cyanide	4	0	ND	ND	ND	ND
Methyl Cyanide	4	0	ND	ND	ND	ND
Isobutanol	4	0	ND	ND	ND	ND
Vinyl acetate	78	4	0.0008	0.0065	0.023	MW 58D (TOTAL)
2-Chloroethyl vinyl ether	90	0	ND	ND	ND	ND
N-Nitrosodimethylamine	54	11	0.0006	0.0058	0.023	MW-30
Bis(2-chloroisopropyl)ether	52	1	0.0061	0.005	0.0061	MW 31 (TOTAL)
2,6-Dichlorophenol	20	2	0.0038	0.0068	0.043	MW-52D
Cobalt	41	11	0.1	0.0816	0.24	MW 58S (TOTAL)
Tin	40	0	ND	ND	ND	ND
Vanadium	41	0	ND	ND	ND	ND
Benzyl alcohol	4	0	ND	ND	ND	ND
Acetophenone	4	0	ND	ND	ND	ND
2-Acetylaminofluorene	4	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	52	0	ND	ND	ND	ND
Benzidine	52	0	ND	ND	ND	ND
4-Aminobiphenyl	4	0	ND	ND	ND	ND
Aniline	4	0	ND	ND	ND	ND
Bis(2-chloro-1-methylethyl)ether	4	0	ND	ND	ND	ND
p-Chloroaniline	4	0	ND	ND	ND	ND
Chlorobenzilate	4	0	ND	ND	ND	ND
p-Chlorom-cresol	4	0	ND	ND	ND	ND
m-Cresol	4	0	ND	ND	ND	ND
o-Cresol	4	0	ND	ND	ND	ND
p-Cresol	4	0	ND	ND	ND	ND
Diallate	4	0	ND	ND	ND	ND
Dimethoate	4	0	ND	ND	ND	ND
p-(dimethylamino)azobenzene	4	0	ND	ND	ND	ND
7,12-Dimethylbenz(a)anthracene	4	0	ND	ND	ND	ND
3,3'-Dimethylbenzidine	4	0	ND	ND	ND	ND
alpha,alpha-Dimethylphenethylamine	4	0	ND	ND	ND	ND
m-Dinitrobenzene	4	0	ND	ND	ND	ND
Diphenylamine	4	0	ND	ND	ND	ND
Disulfoton	4	0	ND	ND	ND	ND
Ethyl methanesulfonate	4	0	ND	ND	ND	ND

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Famphur	4	0	ND	ND	ND	ND
Hexachlorophene	3	0	ND	ND	ND	ND
Hexachloroprene	4	0	ND	ND	ND	ND
Isodrin	4	0	ND	ND	ND	ND
Isosaphrole	4	0	ND	ND	ND	ND
Kepone	4	0	ND	ND	ND	ND
Methapyriline	4	0	ND	ND	ND	ND
3-Methylcholanthrene	4	0	ND	ND	ND	ND
Methyl methanesulfonate	4	0	ND	ND	ND	ND
Methylparathlon	4	0	ND	ND	ND	ND
1,4-Naphthoquinone	4	0	ND	ND	ND	ND
1-Naphthylamine	4	0	ND	ND	ND	ND
2-Naphthylamine	4	0	ND	ND	ND	ND
o-Nitroaniline	4	0	ND	ND	ND	ND
m-Nitroaniline	4	0	ND	ND	ND	ND
p-Nitroaniline	4	0	ND	ND	ND	ND
o-Nitrophenol	4	0	ND	ND	ND	ND
p-Nitrophenol	4	0	ND	ND	ND	ND
4-Nitroquinoline 1-oxide	4	0	ND	ND	ND	ND
N-Nitrosodiethylamine	4	0	ND	ND	ND	ND
N-Nitrosodi-n-butylamine	4	0	ND	ND	ND	ND
N-Nitrosomethylethylamine	4	0	ND	ND	ND	ND
N-Nitrosomorpholine	4	0	ND	ND	ND	ND
N-Nitrosodipiperidine	4	0	ND	ND	ND	ND
N-Nitrosopyrrolidine	4	0	ND	ND	ND	ND
5-Nitro-o-toluidine	4	0	ND	ND	ND	ND
Pentachlorobenzene	4	0	ND	ND	ND	ND
Pentachloronitrobenzene	4	0	ND	ND	ND	ND
Phenacetin	4	0	ND	ND	ND	ND
2-Picoline	4	0	ND	ND	ND	ND
Pronamide	4	0	ND	ND	ND	ND
Pyridine	4	0	ND	ND	ND	ND
Safrole	4	0	ND	ND	ND	ND
Sulfotep	4	0	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	4	0	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	4	0	ND	ND	ND	ND
o-Toluidine	4	0	ND	ND	ND	ND
o,o,o-Triethylphosphorothioate	4	0	ND	ND	ND	ND
sym-Trinitrobenzene	4	0	ND	ND	ND	ND
Thionazin	3	0	ND	ND	ND	ND
Parathlon	2	0	ND	ND	ND	ND
2-Chloronaphthalene	36	0	ND	ND	ND	ND
Aramite	3	0	ND	ND	ND	ND
p-Phenylenediamine	2	0	ND	ND	ND	ND
Phorate	2	0	ND	ND	ND	ND
1,2,3-Trichloropropane	1	0	ND	ND	ND	ND

TABLE 9-22
GROUNDWATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Iodomethane	1	0	ND	ND	ND	ND
Methylmethacrylate	1	0	ND	ND	ND	ND
1,4-Dioxane	1	0	ND	ND	ND	ND
1,2-Dibromoethane	1	0	ND	ND	ND	ND
Pentachloroethane	1	0	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	1	0	ND	ND	ND	ND
Trichlorofluoromethane	13	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-23
BRANCH BROOK PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Beta-BHC	1	0	ND	ND	ND	ND
Delta-BHC	1	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	1	0	ND	ND	ND	ND
Heptaclor	1	0	ND	ND	ND	ND
Aldrin	1	0	ND	ND	ND	ND
Heptaclor epoxide	1	0	ND	ND	ND	ND
Endosulfan I	1	0	ND	ND	ND	ND
Dieldrin	1	0	ND	ND	ND	ND
4,4'-DDE	1	0	ND	ND	ND	ND
Endrin	1	0	ND	ND	ND	ND
Endosulfan II	1	0	ND	ND	ND	ND
4,4'-DDD	1	0	ND	ND	ND	ND
Endosulfan sulfate	1	0	ND	ND	ND	ND
4,4-DDT	1	0	ND	ND	ND	ND
Methoxychlor	1	0	ND	ND	ND	ND
Endrin ketone	1	0	ND	ND	ND	ND
Endrin aldehyde	1	0	ND	ND	ND	ND
Alpha Chlordane	1	0	ND	ND	ND	ND
Gamma Chlordane	1	0	ND	ND	ND	ND
Tetrachloro-m-xylene	1	1	0.0003	0.0003	0.0003	PEK060894PZBBP-02
Decachlorobiphenyl	1	1	0.0002	0.0002	0.0002	PEK060894PZBBP-02
Chlordane	1	0	ND	ND	ND	ND
Toxaphene	1	0	ND	ND	ND	ND
Aroclor 1016	1	0	ND	ND	ND	ND
Aroclor 1221	1	0	ND	ND	ND	ND
Aroclor 1232	1	0	ND	ND	ND	ND
Aroclor 1242	1	0	ND	ND	ND	ND
Aroclor 1248	1	0	ND	ND	ND	ND
Aroclor 1254	1	0	ND	ND	ND	ND
Aroclor 1260	1	0	ND	ND	ND	ND
Chloromethane	1	0	ND	ND	ND	ND
Bromomethane	1	0	ND	ND	ND	ND
Vinyl chloride	1	0	ND	ND	ND	ND
Chloroethane	1	0	ND	ND	ND	ND
Methylene chloride	1	0	ND	ND	ND	ND
Acetone	1	0	ND	ND	ND	ND
Carbon disulfide	1	0	ND	ND	ND	ND
1,1-Dichloroethene	1	0	ND	ND	ND	ND
1,1-Dichloroethane	1	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Chloroform	1	0	ND	ND	ND	ND
1,2-Dichloroethane	1	0	ND	ND	ND	ND
2-Butanone	1	0	ND	ND	ND	ND
1,1,1-Trichloroethane	1	0	ND	ND	ND	ND
Carbon tetrachloride	1	0	ND	ND	ND	ND
Bromodichloromethane	1	0	ND	ND	ND	ND

TABLE 9-23
BRANCH BROOK PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Dichloropropane	1	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	1	0	ND	ND	ND	ND
Trichloroethene	1	0	ND	ND	ND	ND
Dibromochloromethane	1	0	ND	ND	ND	ND
1,1,2-Trichloroethane	1	0	ND	ND	ND	ND
Benzene	1	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	1	0	ND	ND	ND	ND
Bromoform	1	0	ND	ND	ND	ND
4-Methyl-2-pentanone	1	0	ND	ND	ND	ND
2-Hexanone	1	0	ND	ND	ND	ND
Tetrachloroethene	1	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	0	ND	ND	ND	ND
Toluene	1	0	ND	ND	ND	ND
Chlorobenzene	1	0	ND	ND	ND	ND
Ethylbenzene	1	0	ND	ND	ND	ND
Styrene	1	0	ND	ND	ND	ND
Xylenes (total)	1	0	ND	ND	ND	ND
Phenol	2	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	2	0	ND	ND	ND	ND
2-Chlorophenol	2	0	ND	ND	ND	ND
1,3-Dichlorobenzene	2	0	ND	ND	ND	ND
1,4-Dichlorobenzene	2	0	ND	ND	ND	ND
1,2-Dichlorobenzene	2	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	2	0	ND	ND	ND	ND
Hexachloroethane	2	0	ND	ND	ND	ND
Nitrobenzene	2	0	ND	ND	ND	ND
Isophorone	2	0	ND	ND	ND	ND
2-Nitrophenol	2	0	ND	ND	ND	ND
2,4-Dimethylphenol	2	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	2	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2	0	ND	ND	ND	ND
Naphthalene	2	0	ND	ND	ND	ND
Hexachlorobutadiene	2	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	2	0	ND	ND	ND	ND
2-Methylnaphthalene	2	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	2	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	2	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	2	0	ND	ND	ND	ND
2-Chloronaphthalene	2	0	ND	ND	ND	ND
Dimethylphthalate	2	0	ND	ND	ND	ND
Acenaphthylene	2	0	ND	ND	ND	ND
2,6-Dinitrotoluene	2	0	ND	ND	ND	ND
Acenaphthene	2	0	ND	ND	ND	ND
2,4-Dinitrophenol	2	0	ND	ND	ND	ND
4-Nitrophenol	2	0	ND	ND	ND	ND
Dibenzofuran	2	0	ND	ND	ND	ND

TABLE 9-23
BRANCH BROOK PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,4-Dinitrotoluene	2	0	ND	ND	ND	ND
Diethylphthalate	2	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	2	0	ND	ND	ND	ND
Fluorene	2	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	2	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	2	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	2	0	ND	ND	ND	ND
Hexachlorobenzene	2	0	ND	ND	ND	ND
Pentachlorophenol	2	0	ND	ND	ND	ND
Phenanthrene	2	0	ND	ND	ND	ND
Anthracene	2	0	ND	ND	ND	ND
Di-n-butylphthalate	2	0	ND	ND	ND	ND
Fluoranthene	2	0	ND	ND	ND	ND
Pyrene	2	0	ND	ND	ND	ND
Benzylbutylphthalate	2	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	2	0	ND	ND	ND	ND
Benzo(a)anthracene	2	0	ND	ND	ND	ND
Chrysene	2	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	2	0	ND	ND	ND	ND
Di-n-octylphthalate	2	0	ND	ND	ND	ND
Benzo(b)fluoranthene	2	0	ND	ND	ND	ND
Benzo(k)fluoranthene	2	0	ND	ND	ND	ND
Benzo(a)pyrene	2	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	2	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	2	0	ND	ND	ND	ND
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	0	ND	ND	ND	ND
Barium	2	0	ND	ND	ND	ND
Beryllium	2	0	ND	ND	ND	ND
Cadmium	2	0	ND	ND	ND	ND
Calcium	2	2	14.	16.5	19.	PEK092994PZBBP-02 (TOTAL)
Chromium	2	0	ND	ND	ND	ND
Copper	2	0	ND	ND	ND	ND
Iron	2	1	0.16	0.0875	0.16	PEK092994PZBBP-02 (TOTAL)
Lead	2	0	ND	ND	ND	ND
Magnesium	2	2	3.4	3.8	4.2	PEK092994PZBBP-02 (TOTAL)
Manganese	2	1	0.051	0.038	0.051	PEK060894PZBBP-02
Mercury	2	0	ND	ND	ND	ND
Nickel	2	0	ND	ND	ND	ND
Potassium	2	2	5.7	6.1	6.5	PEK092994PZBBP-02 (TOTAL)
Selenium	1	0	ND	ND	ND	ND
Silver	2	0	ND	ND	ND	ND
Sodium	2	2	32.	39.	46.	PEK092994PZBBP-02 (TOTAL)
Thallium	2	0	ND	ND	ND	ND
Zinc	2	2	0.3	0.32	0.34	PEK060894PZBBP-02
Vinyl acetate	1	0	ND	ND	ND	ND

TABLE 9-23
BRANCH BROOK PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chloroethyl vinyl ether	1	0	ND	ND	ND	ND
N-Nitrosodimethylamine	2	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	2	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Cobalt	1	0	ND	ND	ND	ND
Tin	1	0	ND	ND	ND	ND
Vanadium	1	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	2	0	ND	ND	ND	ND
Benzidine	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-24
BRANCH BROOK PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Beta-BHC	3	0	ND	ND	ND	ND
Delta-BHC	3	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	3	0	ND	ND	ND	ND
Heptaclor	3	0	ND	ND	ND	ND
Aldrin	3	0	ND	ND	ND	ND
Heptaclor epoxide	3	0	ND	ND	ND	ND
Endosulfan I	3	0	ND	ND	ND	ND
Dieldrin	3	1	0.	0.	0.	PEK060894PZBBP-04
4,4'-DDE	3	0	ND	ND	ND	ND
Endrin	3	0	ND	ND	ND	ND
Endosulfan II	3	0	ND	ND	ND	ND
4,4'-DDD	3	0	ND	ND	ND	ND
Endosulfan sulfate	3	0	ND	ND	ND	ND
4,4-DDT	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Endrin ketone	3	0	ND	ND	ND	ND
Endrin aldehyde	3	0	ND	ND	ND	ND
Alpha Chlordane	3	0	ND	ND	ND	ND
Gamma Chlordane	3	0	ND	ND	ND	ND
Tetrachloro-m-xylene	3	3	0.0002	0.0002	0.0003	PEK060894PZBBP-03
Decachlorobiphenyl	3	3	0.0002	0.0002	0.0002	PEK060894PZBBP-01
Chlordane	3	0	ND	ND	ND	ND
Toxaphene	3	0	ND	ND	ND	ND
Aroclor 1016	3	0	ND	ND	ND	ND
Aroclor 1221	3	0	ND	ND	ND	ND
Aroclor 1232	3	0	ND	ND	ND	ND
Aroclor 1242	3	0	ND	ND	ND	ND
Aroclor 1248	3	0	ND	ND	ND	ND
Aroclor 1254	3	0	ND	ND	ND	ND
Aroclor 1260	3	0	ND	ND	ND	ND
Chloromethane	3	0	ND	ND	ND	ND
Bromomethane	3	0	ND	ND	ND	ND
Vinyl chloride	3	0	ND	ND	ND	ND
Chloroethane	3	0	ND	ND	ND	ND
Methylene chloride	3	0	ND	ND	ND	ND
Acetone	3	0	ND	ND	ND	ND
Carbon disulfide	3	0	ND	ND	ND	ND
1,1-Dichloroethene	3	0	ND	ND	ND	ND
1,1-Dichloroethane	3	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Chloroform	3	0	ND	ND	ND	ND
1,2-Dichloroethane	3	0	ND	ND	ND	ND
2-Butanone	3	0	ND	ND	ND	ND
1,1,1-Trichloroethane	3	0	ND	ND	ND	ND
Carbon tetrachloride	3	0	ND	ND	ND	ND
Bromodichloromethane	3	0	ND	ND	ND	ND

TABLE 9-24
BRANCH BROOK PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Dichloropropane	3	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	3	0	ND	ND	ND	ND
Trichloroethene	3	0	ND	ND	ND	ND
Dibromochloromethane	3	0	ND	ND	ND	ND
1,1,2-Trichloroethane	3	0	ND	ND	ND	ND
Benzene	3	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	3	0	ND	ND	ND	ND
Bromoform	3	0	ND	ND	ND	ND
4-Methyl-2-pentanone	3	0	ND	ND	ND	ND
2-Hexanone	3	0	ND	ND	ND	ND
Tetrachloroethene	3	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3	0	ND	ND	ND	ND
Toluene	3	0	ND	ND	ND	ND
Chlorobenzene	3	0	ND	ND	ND	ND
Ethylbenzene	3	0	ND	ND	ND	ND
Styrene	3	0	ND	ND	ND	ND
Xylenes (total)	3	0	ND	ND	ND	ND
Phenol	6	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	6	0	ND	ND	ND	ND
2-Chlorophenol	6	0	ND	ND	ND	ND
1,3-Dichlorobenzene	6	0	ND	ND	ND	ND
1,4-Dichlorobenzene	6	0	ND	ND	ND	ND
1,2-Dichlorobenzene	6	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	6	0	ND	ND	ND	ND
Hexachloroethane	6	0	ND	ND	ND	ND
Nitrobenzene	6	0	ND	ND	ND	ND
Isophorone	6	0	ND	ND	ND	ND
2-Nitrophenol	6	0	ND	ND	ND	ND
2,4-Dimethylphenol	6	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	6	0	ND	ND	ND	ND
2,4-Dichlorophenol	6	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	6	0	ND	ND	ND	ND
Naphthalene	6	0	ND	ND	ND	ND
Hexachlorobutadiene	6	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	6	0	ND	ND	ND	ND
2-Methylnaphthalene	6	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	6	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	6	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	6	0	ND	ND	ND	ND
2-Chloronaphthalene	6	0	ND	ND	ND	ND
Dimethylphthalate	6	0	ND	ND	ND	ND
Acenaphthylene	6	0	ND	ND	ND	ND
2,6-Dinitrotoluene	6	0	ND	ND	ND	ND
Acenaphthene	6	0	ND	ND	ND	ND
2,4-Dinitrophenol	6	0	ND	ND	ND	ND
4-Nitrophenol	6	0	ND	ND	ND	ND
Dibenzofuran	6	0	ND	ND	ND	ND

TABLE 9-24
BRANCH BROOK PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,4-Dinitrotoluene	6	0	ND	ND	ND	ND
Diethylphthalate	6	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	6	0	ND	ND	ND	ND
Fluorene	6	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	6	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	6	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	6	0	ND	ND	ND	ND
Hexachlorobenzene	6	0	ND	ND	ND	ND
Pentachlorophenol	6	0	ND	ND	ND	ND
Phenanthrene	6	0	ND	ND	ND	ND
Anthracene	6	0	ND	ND	ND	ND
Di-n-butylphthalate	6	0	ND	ND	ND	ND
Fluoranthene	6	0	ND	ND	ND	ND
Pyrene	6	0	ND	ND	ND	ND
Benzylbutylphthalate	6	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	6	0	ND	ND	ND	ND
Benzo(a)anthracene	6	0	ND	ND	ND	ND
Chrysene	6	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	6	0	ND	ND	ND	ND
Di-n-octylphthalate	6	0	ND	ND	ND	ND
Benzo(b)fluoranthene	6	0	ND	ND	ND	ND
Benzo(k)fluoranthene	6	0	ND	ND	ND	ND
Benzo(a)pyrene	6	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	6	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	6	0	ND	ND	ND	ND
Antimony	6	0	ND	ND	ND	ND
Arsenic	6	0	ND	ND	ND	ND
Barium	6	0	ND	ND	ND	ND
Beryllium	6	0	ND	ND	ND	ND
Cadmium	6	0	ND	ND	ND	ND
Calcium	6	6	8.1	19.5833	56.	PEK060894PZBBP-04
Chromium	6	0	ND	ND	ND	ND
Copper	6	0	ND	ND	ND	ND
Iron	6	5	0.04	0.4642	1.6	PEK060894PZBBP-03
Lead	6	0	ND	ND	ND	ND
Magnesium	6	6	1.6	5.1	15.	PEK060894PZBBP-04
Manganese	6	2	0.11	0.0625	0.18	PEK060894PZBBP-04
Mercury	6	0	ND	ND	ND	ND
Nickel	6	0	ND	ND	ND	ND
Potassium	6	6	2.8	4.4667	7.8	PEK060894PZBBP-04
Selenium	3	0	ND	ND	ND	ND
Silver	6	0	ND	ND	ND	ND
Sodium	6	6	11.	22.5	32.	PEK060894PZBBP-04
Thallium	6	0	ND	ND	ND	ND
Zinc	6	6	0.28	1.45	2.4	PEK060894PZBBP-04
Vinyl acetate	3	0	ND	ND	ND	ND

TABLE 9-24
BRANCH BROOK PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chloroethyl vinyl ether	3	0	ND	ND	ND	ND
N-Nitrosodimethylamine	6	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	6	0	ND	ND	ND	ND
2,6-Dichlorophenol	6	0	ND	ND	ND	ND
Cobalt	3	0	ND	ND	ND	ND
Tin	3	0	ND	ND	ND	ND
Vanadium	3	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	6	0	ND	ND	ND	ND
Benzidine	6	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-25
NAUGATUCK RIVER PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Beta-BHC	1	0	ND	ND	ND	ND
Delta-BHC	1	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	1	0	ND	ND	ND	ND
Heptaclor	1	0	ND	ND	ND	ND
Aldrin	1	0	ND	ND	ND	ND
Heptaclor epoxide	1	0	ND	ND	ND	ND
Endosulfan I	1	0	ND	ND	ND	ND
Dieldrin	1	1	0.	0.	0.	PEK060894PZNRP-02
4,4'-DDE	1	0	ND	ND	ND	ND
Endrin	1	0	ND	ND	ND	ND
Endosulfan II	1	0	ND	ND	ND	ND
4,4'-DDD	1	0	ND	ND	ND	ND
Endosulfan sulfate	1	0	ND	ND	ND	ND
4,4-DDT	1	0	ND	ND	ND	ND
Methoxychlor	1	0	ND	ND	ND	ND
Endrin ketone	1	0	ND	ND	ND	ND
Endrin aldehyde	1	0	ND	ND	ND	ND
Alpha Chlordane	1	0	ND	ND	ND	ND
Gamma Chlordane	1	0	ND	ND	ND	ND
Tetrachloro-m-xylene	1	1	0.0002	0.0002	0.0002	PEK060894PZNRP-02
Decachlorobiphenyl	1	1	0.0001	0.0001	0.0001	PEK060894PZNRP-02
Chlordane	1	0	ND	ND	ND	ND
Toxaphene	1	0	ND	ND	ND	ND
Aroclor 1016	1	0	ND	ND	ND	ND
Aroclor 1221	1	0	ND	ND	ND	ND
Aroclor 1232	1	0	ND	ND	ND	ND
Aroclor 1242	1	0	ND	ND	ND	ND
Aroclor 1248	1	0	ND	ND	ND	ND
Aroclor 1254	1	0	ND	ND	ND	ND
Aroclor 1260	1	0	ND	ND	ND	ND
Chloromethane	1	0	ND	ND	ND	ND
Bromomethane	1	0	ND	ND	ND	ND
Vinyl chloride	1	0	ND	ND	ND	ND
Chloroethane	1	0	ND	ND	ND	ND
Methylene chloride	1	0	ND	ND	ND	ND
Acetone	1	0	ND	ND	ND	ND
Carbon disulfide	1	0	ND	ND	ND	ND
1,1-Dichloroethene	1	0	ND	ND	ND	ND
1,1-Dichloroethane	1	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	1	0	ND	ND	ND	ND
Chloroform	1	0	ND	ND	ND	ND
1,2-Dichloroethane	1	0	ND	ND	ND	ND
2-Butanone	1	0	ND	ND	ND	ND
1,1,1-Trichloroethane	1	0	ND	ND	ND	ND
Carbon tetrachloride	1	0	ND	ND	ND	ND
Bromodichloromethane	1	0	ND	ND	ND	ND

TABLE 9-25
NAUGATUCK RIVER PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Dichloropropane	1	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	1	0	ND	ND	ND	ND
Trichloroethene	1	0	ND	ND	ND	ND
Dibromochloromethane	1	0	ND	ND	ND	ND
1,1,2-Trichloroethane	1	0	ND	ND	ND	ND
Benzene	1	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	1	0	ND	ND	ND	ND
Bromoform	1	0	ND	ND	ND	ND
4-Methyl-2-pentanone	1	0	ND	ND	ND	ND
2-Hexanone	1	0	ND	ND	ND	ND
Tetrachloroethene	1	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	0	ND	ND	ND	ND
Toluene	1	0	ND	ND	ND	ND
Chlorobenzene	1	0	ND	ND	ND	ND
Ethylbenzene	1	0	ND	ND	ND	ND
Styrene	1	0	ND	ND	ND	ND
Xylenes (total)	1	0	ND	ND	ND	ND
Phenol	2	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	2	0	ND	ND	ND	ND
2-Chlorophenol	2	0	ND	ND	ND	ND
1,3-Dichlorobenzene	2	0	ND	ND	ND	ND
1,4-Dichlorobenzene	2	0	ND	ND	ND	ND
1,2-Dichlorobenzene	2	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	2	0	ND	ND	ND	ND
Hexachloroethane	2	0	ND	ND	ND	ND
Nitrobenzene	2	0	ND	ND	ND	ND
Isophorone	2	0	ND	ND	ND	ND
2-Nitrophenol	2	0	ND	ND	ND	ND
2,4-Dimethylphenol	2	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	2	0	ND	ND	ND	ND
2,4-Dichlorophenol	2	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2	0	ND	ND	ND	ND
Naphthalene	2	0	ND	ND	ND	ND
Hexachlorobutadiene	2	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	2	0	ND	ND	ND	ND
2-Methylnaphthalene	2	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	2	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	2	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	2	0	ND	ND	ND	ND
2-Chloronaphthalene	2	0	ND	ND	ND	ND
Dimethylphthalate	2	0	ND	ND	ND	ND
Acenaphthylene	2	0	ND	ND	ND	ND
2,6-Dinitrotoluene	2	0	ND	ND	ND	ND
Acenaphthene	2	0	ND	ND	ND	ND
2,4-Dinitrophenol	2	0	ND	ND	ND	ND
4-Nitrophenol	2	0	ND	ND	ND	ND
Dibenzofuran	2	0	ND	ND	ND	ND

TABLE 9-25
NAUGATUCK RIVER PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,4-Dinitrotoluene	2	0	ND	ND	ND	ND
Diethylphthalate	2	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	2	0	ND	ND	ND	ND
Fluorene	2	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	2	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	2	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	2	0	ND	ND	ND	ND
Hexachlorobenzene	2	0	ND	ND	ND	ND
Pentachlorophenol	2	0	ND	ND	ND	ND
Phenanthrene	2	0	ND	ND	ND	ND
Anthracene	2	0	ND	ND	ND	ND
Di-n-butylphthalate	2	0	ND	ND	ND	ND
Fluoranthene	2	0	ND	ND	ND	ND
Pyrene	2	0	ND	ND	ND	ND
Benzylbutylphthalate	2	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	2	0	ND	ND	ND	ND
Benzo(a)anthracene	2	0	ND	ND	ND	ND
Chrysene	2	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	2	0	ND	ND	ND	ND
Di-n-octylphthalate	2	0	ND	ND	ND	ND
Benzo(b)fluoranthene	2	0	ND	ND	ND	ND
Benzo(k)fluoranthene	2	0	ND	ND	ND	ND
Benzo(a)pyrene	2	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	2	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	2	0	ND	ND	ND	ND
Antimony	3	0	ND	ND	ND	ND
Arsenic	3	0	ND	ND	ND	ND
Barium	3	0	ND	ND	ND	ND
Beryllium	3	0	ND	ND	ND	ND
Cadmium	3	0	ND	ND	ND	ND
Calcium	3	3	8.	8.6667	9.1	PEK092994PZNRP-02 (TOTAL)
Chromium	3	0	ND	ND	ND	ND
Copper	3	1	0.04	0.02	0.04	PEK092994PZNRP-02 (TOTAL)
Iron	3	3	2.6	4.	6.6	PEK092994PZNRP-02 (TOTAL)
Lead	3	0	ND	ND	ND	ND
Magnesium	3	3	2.	2.5333	2.9	PEK092994PZNRP-02 (TOTAL)
Manganese	3	3	0.52	0.5767	0.68	PEK092994PZNRP-02 (TOTAL)
Mercury	3	0	ND	ND	ND	ND
Nickel	3	0	ND	ND	ND	ND
Potassium	3	3	2.	2.5333	2.8	PEK092994PZNRP-02 (DISS)
Selenium	1	0	ND	ND	ND	ND
Silver	3	0	ND	ND	ND	ND
Sodium	3	3	15.	16.	17.	PEK092994PZNRP-02 (TOTAL)
Thallium	3	0	ND	ND	ND	ND
Zinc	3	3	0.45	1.0167	1.3	PEK092994PZNRP-02 (DISS)
Vinyl acetate	1	0	ND	ND	ND	ND

TABLE 9-25
NAUGATUCK RIVER PIEZOMETER UPGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chloroethyl vinyl ether	1	0	ND	ND	ND	ND
N-Nitrosodimethylamine	2	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	2	0	ND	ND	ND	ND
2,6-Dichlorophenol	2	0	ND	ND	ND	ND
Cobalt	2	0	ND	ND	ND	ND
Tin	2	0	ND	ND	ND	ND
Vanadium	2	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	2	0	ND	ND	ND	ND
Benzidine	2	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-26
NAUGATUCK RIVER PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Beta-BHC	3	0	ND	ND	ND	ND
Delta-BHC	3	1	0.	0.	0.	PEK060894PZNRP-03
Gamma-BHC (Lindane)	3	0	ND	ND	ND	ND
Heptaclor	3	0	ND	ND	ND	ND
Aldrin	3	0	ND	ND	ND	ND
Heptaclor epoxide	3	0	ND	ND	ND	ND
Endosulfan I	3	0	ND	ND	ND	ND
Dieldrin	3	0	ND	ND	ND	ND
4,4'-DDE	3	0	ND	ND	ND	ND
Endrin	3	0	ND	ND	ND	ND
Endosulfan II	3	0	ND	ND	ND	ND
4,4'-DDD	3	0	ND	ND	ND	ND
Endosulfan sulfate	3	0	ND	ND	ND	ND
4,4-DDT	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Endrin ketone	3	0	ND	ND	ND	ND
Endrin aldehyde	3	0	ND	ND	ND	ND
Alpha Chlordane	3	0	ND	ND	ND	ND
Gamma Chlordane	3	0	ND	ND	ND	ND
Tetrachloro-m-xylene	3	3	0.0002	0.0002	0.0003	PEK060894PZNRP-03
Decachlorobiphenyl	3	3	0.0002	0.0002	0.0002	PEK060894PZNRP-01
Chlordane	3	0	ND	ND	ND	ND
Toxaphene	3	0	ND	ND	ND	ND
Aroclor 1016	3	0	ND	ND	ND	ND
Aroclor 1221	3	0	ND	ND	ND	ND
Aroclor 1232	3	0	ND	ND	ND	ND
Aroclor 1242	3	0	ND	ND	ND	ND
Aroclor 1248	3	0	ND	ND	ND	ND
Aroclor 1254	3	0	ND	ND	ND	ND
Aroclor 1260	3	0	ND	ND	ND	ND
Chloromethane	3	0	ND	ND	ND	ND
Bromomethane	3	0	ND	ND	ND	ND
Vinyl chloride	3	0	ND	ND	ND	ND
Chloroethane	3	0	ND	ND	ND	ND
Methylene chloride	3	0	ND	ND	ND	ND
Acetone	3	0	ND	ND	ND	ND
Carbon disulfide	3	0	ND	ND	ND	ND
1,1-Dichloroethene	3	0	ND	ND	ND	ND
1,1-Dichloroethane	3	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	3	0	ND	ND	ND	ND
Chloroform	3	0	ND	ND	ND	ND
1,2-Dichloroethane	3	0	ND	ND	ND	ND
2-Butanone	3	0	ND	ND	ND	ND
1,1,1-Trichloroethane	3	0	ND	ND	ND	ND
Carbon tetrachloride	3	0	ND	ND	ND	ND
Bromodichloromethane	3	0	ND	ND	ND	ND

TABLE 9-26
NAUGATUCK RIVER PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
1,2-Dichloropropane	3	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	3	0	ND	ND	ND	ND
Trichloroethene	3	1	0.0005	0.0035	0.0005	PEK060894PZNRP-01
Dibromochloromethane	3	0	ND	ND	ND	ND
1,1,2-Trichloroethane	3	0	ND	ND	ND	ND
Benzene	3	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	3	0	ND	ND	ND	ND
Bromoform	3	0	ND	ND	ND	ND
4-Methyl-2-pentanone	3	0	ND	ND	ND	ND
2-Hexanone	3	0	ND	ND	ND	ND
Tetrachloroethene	3	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3	0	ND	ND	ND	ND
Toluene	3	0	ND	ND	ND	ND
Chlorobenzene	3	0	ND	ND	ND	ND
Ethylbenzene	3	0	ND	ND	ND	ND
Styrene	3	0	ND	ND	ND	ND
Xylenes (total)	3	0	ND	ND	ND	ND
Phenol	6	0	ND	ND	ND	ND
Bis(2-chloroethyl)ether	6	0	ND	ND	ND	ND
2-Chlorophenol	6	0	ND	ND	ND	ND
1,3-Dichlorobenzene	6	0	ND	ND	ND	ND
1,4-Dichlorobenzene	6	0	ND	ND	ND	ND
1,2-Dichlorobenzene	6	0	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	6	0	ND	ND	ND	ND
Hexachloroethane	6	0	ND	ND	ND	ND
Nitrobenzene	6	0	ND	ND	ND	ND
Isophorone	6	0	ND	ND	ND	ND
2-Nitrophenol	6	0	ND	ND	ND	ND
2,4-Dimethylphenol	6	0	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	6	0	ND	ND	ND	ND
2,4-Dichlorophenol	6	0	ND	ND	ND	ND
1,2,4-Trichlorobenzene	6	0	ND	ND	ND	ND
Naphthalene	6	0	ND	ND	ND	ND
Hexachlorobutadiene	6	0	ND	ND	ND	ND
4-Chloro-3-methylphenol	6	0	ND	ND	ND	ND
2-Methylnaphthalene	6	0	ND	ND	ND	ND
Hexachlorocyclopentadiene	6	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	6	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	6	0	ND	ND	ND	ND
2-Chloronaphthalene	6	0	ND	ND	ND	ND
Dimethylphthalate	6	0	ND	ND	ND	ND
Acenaphthylene	6	0	ND	ND	ND	ND
2,6-Dinitrotoluene	6	0	ND	ND	ND	ND
Acenaphthene	6	0	ND	ND	ND	ND
2,4-Dinitrophenol	6	0	ND	ND	ND	ND
4-Nitrophenol	6	0	ND	ND	ND	ND
Dibenzofuran	6	0	ND	ND	ND	ND

TABLE 9-26
NAUGATUCK RIVER PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,4-Dinitrotoluene	6	0	ND	ND	ND	ND
Diethylphthalate	6	0	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	6	0	ND	ND	ND	ND
Fluorene	6	0	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	6	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	6	0	ND	ND	ND	ND
4-Bromophenyl phenyl ether	6	0	ND	ND	ND	ND
Hexachlorobenzene	6	0	ND	ND	ND	ND
Pentachlorophenol	6	0	ND	ND	ND	ND
Phenanthrene	6	0	ND	ND	ND	ND
Anthracene	6	0	ND	ND	ND	ND
Di-n-butylphthalate	6	0	ND	ND	ND	ND
Fluoranthene	6	0	ND	ND	ND	ND
Pyrene	6	0	ND	ND	ND	ND
Benzylbutylphthalate	6	0	ND	ND	ND	ND
3,3'-Dichlorobenzidine	6	0	ND	ND	ND	ND
Benzo(a)anthracene	6	0	ND	ND	ND	ND
Chrysene	6	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	6	0	ND	ND	ND	ND
Di-n-octylphthalate	6	0	ND	ND	ND	ND
Benzo(b)fluoranthene	6	0	ND	ND	ND	ND
Benzo(k)fluoranthene	6	0	ND	ND	ND	ND
Benzo(a)pyrene	6	0	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	6	0	ND	ND	ND	ND
Benzo(g,h,i)perylene	6	0	ND	ND	ND	ND
Antimony	6	0	ND	ND	ND	ND
Arsenic	6	0	ND	ND	ND	ND
Barium	6	0	ND	ND	ND	ND
Beryllium	6	0	ND	ND	ND	ND
Cadmium	6	0	ND	ND	ND	ND
Calcium	6	6	7.6	9.7667	12.	PEK060894PZNRP-01
Chromium	6	0	ND	ND	ND	ND
Copper	6	6	0.02	0.0333	0.04	PEK060894PZNRP-01
Iron	6	6	0.03	0.145	0.31	PEK092994PZNRP-01 (TOTAL)
Lead	6	0	ND	ND	ND	ND
Magnesium	6	6	2.4	3.0333	3.8	PEK060894PZNRP-03
Manganese	6	4	0.054	0.164	0.39	PEK060894PZNRP-04
Mercury	6	0	ND	ND	ND	ND
Nickel	6	0	ND	ND	ND	ND
Potassium	6	6	2.3	2.8333	3.6	PEK060894PZNRP-01
Selenium	3	0	ND	ND	ND	ND
Silver	6	0	ND	ND	ND	ND
Sodium	6	6	13.	17.6667	22.	PEK060894PZNRP-01
Thallium	6	0	ND	ND	ND	ND
Zinc	6	6	0.28	0.7883	1.2	HMH092994PZNRP-04 (TOTAL)
Vinyl acetate	3	0	ND	ND	ND	ND

TABLE 9-26
NAUGATUCK RIVER PIEZOMETER DOWNGRADIENT DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chloroethyl vinyl ether	3	0	ND	ND	ND	ND
N-Nitrosodimethylamine	6	0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	6	0	ND	ND	ND	ND
2,6-Dichlorophenol	6	0	ND	ND	ND	ND
Cobalt	3	0	ND	ND	ND	ND
Tin	3	0	ND	ND	ND	ND
Vanadium	3	0	ND	ND	ND	ND
1,2-Diphenylhydrazine	6	0	ND	ND	ND	ND
Benzidine	6	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-27
BRANCH BROOK UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Delta-BHC	3	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	3	0	ND	ND	ND	ND
Heptaclor	3	0	ND	ND	ND	ND
Aldrin	3	0	ND	ND	ND	ND
Endosulfan I	3	0	ND	ND	ND	ND
Dieldrin	3	0	ND	ND	ND	ND
4,4'-DDE	3	0	ND	ND	ND	ND
Endosulfan II	3	0	ND	ND	ND	ND
4,4-DDT	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Endrin aldehyde	3	0	ND	ND	ND	ND
Tetrachloro-m-xylene	3	3	0.0003	0.0003	0.0003	PEK092194SWBW01
Decachlorobiphenyl	3	3	0.0002	0.0002	0.0003	PEK092194SWBW01
Aroclor 1242	3	0	ND	ND	ND	ND
Aroclor 1254	3	0	ND	ND	ND	ND
Chloromethane	6	0	ND	ND	ND	ND
Bromomethane	6	0	ND	ND	ND	ND
Vinyl chloride	6	0	ND	ND	ND	ND
Chloroethane	6	0	ND	ND	ND	ND
Methylene chloride	6	3	0.0016	0.0033	0.0016	PEK092194SWBW01
Acetone	6	2	0.0028	0.0043	0.0032	PEK092194SWBW03
Carbon disulfide	6	0	ND	ND	ND	ND
1,1-Dichloroethene	6	0	ND	ND	ND	ND
1,1-Dichloroethane	6	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	6	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	6	0	ND	ND	ND	ND
Chloroform	6	0	ND	ND	ND	ND
1,2-Dichloroethane	6	0	ND	ND	ND	ND
2-Butanone	6	0	ND	ND	ND	ND
1,1,1-Trichloroethane	6	0	ND	ND	ND	ND
Carbon tetrachloride	6	0	ND	ND	ND	ND
Bromodichloromethane	6	0	ND	ND	ND	ND
1,2-Dichloropropane	6	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	6	0	ND	ND	ND	ND
Trichloroethene	6	0	ND	ND	ND	ND
Dibromochloromethane	6	0	ND	ND	ND	ND
1,1,2-Trichloroethane	6	0	ND	ND	ND	ND
Benzene	6	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	6	0	ND	ND	ND	ND
Bromoform	6	0	ND	ND	ND	ND
4-Methyl-2-pentanone	6	0	ND	ND	ND	ND
2-Hexanone	6	0	ND	ND	ND	ND
Tetrachloroethene	6	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	6	0	ND	ND	ND	ND
Toluene	6	0	ND	ND	ND	ND
Chlorobenzene	6	0	ND	ND	ND	ND
Ethylbenzene	6	0	ND	ND	ND	ND

TABLE 9-27
BRANCH BROOK UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	6	0	ND	ND	ND	ND
Xylenes (total)	6	0	ND	ND	ND	ND
2-Chlorophenol	6	0	ND	ND	ND	ND
2,4-Dichlorophenol	6	0	ND	ND	ND	ND
Naphthalene	6	0	ND	ND	ND	ND
2-Methylnaphthalene	6	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	6	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	6	0	ND	ND	ND	ND
Acenaphthene	6	0	ND	ND	ND	ND
Dibenzofuran	6	0	ND	ND	ND	ND
Diethylphthalate	6	0	ND	ND	ND	ND
Fluorene	6	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	6	0	ND	ND	ND	ND
Phenanthrene	6	0	ND	ND	ND	ND
Anthracene	6	0	ND	ND	ND	ND
Di-n-butylphthalate	6	2	0.0013	0.0039	0.0023	HMH060694SWBW-02
Fluoranthene	6	0	ND	ND	ND	ND
Pyrene	6	0	ND	ND	ND	ND
Benzylbutylphthalate	6	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	6	0	ND	ND	ND	ND
Di-n-octylphthalate	6	0	ND	ND	ND	ND
Benzo(b)fluoranthene	6	0	ND	ND	ND	ND
Benzo(k)fluoranthene	6	0	ND	ND	ND	ND
Benzo(a)pyrene	6	0	ND	ND	ND	ND
Antimony	6	0	ND	ND	ND	ND
Arsenic	6	0	ND	ND	ND	ND
Barium	6	0	ND	ND	ND	ND
Beryllium	6	0	ND	ND	ND	ND
Cadmium	6	0	ND	ND	ND	ND
Calcium	6	6	7.5	8.1	8.5	PEK100394SWBW-03 (TOTAL)
Chromium	6	0	ND	ND	ND	ND
Copper	6	1	0.02	0.0117	0.02	HMH060694SWBW-03
Iron	6	6	0.04	0.1483	0.26	PEK100394SWBW-01 (TOTAL)
Lead	6	0	ND	ND	ND	ND
Magnesium	6	6	2.4	2.6	2.8	HMH060694SWBW-01
Manganese	6	2	0.051	0.0286	0.06	PEK100394SWBW-03 (TOTAL)
Mercury	6	3	0.005	0.0038	0.005	PEK100394SWBW-01 (TOTAL)
Nickel	6	0	ND	ND	ND	ND
Potassium	6	6	1.3	1.7833	2.	HMH060694SWBW-01
Selenium	3	0	ND	ND	ND	ND
Silver	6	0	ND	ND	ND	ND
Sodium	6	6	7.	9.15	12.	HMH060694SWBW-01
Thallium	6	0	ND	ND	ND	ND
Zinc	6	2	0.01	0.007	0.012	HMH060694SWBW-01
Vinyl acetate	6	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	6	0	ND	ND	ND	ND
N-Nitrosodimethylamine	6	0	ND	ND	ND	ND

TABLE 9-27
BRANCH BROOK UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,6-Dichlorophenol	6	0	ND	ND	ND	ND
Cobalt	3	0	ND	ND	ND	ND
Tin	3	0	ND	ND	ND	ND
Vanadium	3	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-28
BRANCH BROOK DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Delta-BHC	7	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	7	0	ND	ND	ND	ND
Heptaclor	7	0	ND	ND	ND	ND
Aldrin	7	0	ND	ND	ND	ND
Endosulfan I	7	0	ND	ND	ND	ND
Dieldrin	7	0	ND	ND	ND	ND
4,4'-DDE	7	0	ND	ND	ND	ND
Endrin	0	0	NA	ND	NA	NA
Endosulfan II	7	0	ND	ND	ND	ND
4,4'-DDD	0	0	NA	ND	NA	NA
4,4-DDT	7	0	ND	ND	ND	ND
Methoxychlor	7	0	ND	ND	ND	ND
Endrin aldehyde	7	0	ND	ND	ND	ND
Tetrachloro-m-xylene	7	7	0.0002	0.0003	0.0003	PEK092194SWBW09
Decachlorobiphenyl	7	7	0.0002	0.0003	0.0003	PEK092194SWBW07
Aroclor 1242	7	0	ND	ND	ND	ND
Aroclor 1254	7	0	ND	ND	ND	ND
Chloromethane	14	0	ND	ND	ND	ND
Bromomethane	14	0	ND	ND	ND	ND
Vinyl chloride	14	0	ND	ND	ND	ND
Chloroethane	14	0	ND	ND	ND	ND
Methylene chloride	14	1	0.0016	0.0048	0.0016	PEK092194SWBW04
Acetone	14	0	ND	ND	ND	ND
Carbon disulfide	14	0	ND	ND	ND	ND
1,1-Dichloroethene	14	0	ND	ND	ND	ND
1,1-Dichloroethane	14	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	14	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	14	0	ND	ND	ND	ND
Chloroform	14	0	ND	ND	ND	ND
1,2-Dichloroethane	14	0	ND	ND	ND	ND
2-Butanone	14	0	ND	ND	ND	ND
1,1,1-Trichloroethane	14	0	ND	ND	ND	ND
Carbon tetrachloride	14	0	ND	ND	ND	ND
Bromodichloromethane	14	0	ND	ND	ND	ND
1,2-Dichloropropane	14	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	14	0	ND	ND	ND	ND
Trichloroethene	14	0	ND	ND	ND	ND
Dibromochloromethane	14	0	ND	ND	ND	ND
1,1,2-Trichloroethane	14	0	ND	ND	ND	ND
Benzene	14	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	14	0	ND	ND	ND	ND
Bromoform	14	0	ND	ND	ND	ND
4-Methyl-2-pentanone	14	0	ND	ND	ND	ND
2-Hexanone	14	0	ND	ND	ND	ND
Tetrachloroethene	14	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	14	0	ND	ND	ND	ND
Toluene	14	0	ND	ND	ND	ND

TABLE 9-28
BRANCH BROOK DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Chlorobenzene	14	0	ND	ND	ND	ND
Ethylbenzene	14	0	ND	ND	ND	ND
Styrene	14	0	ND	ND	ND	ND
Xylenes (total)	14	0	ND	ND	ND	ND
2-Chlorophenol	14	0	ND	ND	ND	ND
2,4-Dimethylphenol	0	0	NA	ND	NA	NA
Bis(2-chloroethoxy)methane	0	0	NA	ND	NA	NA
2,4-Dichlorophenol	14	0	ND	ND	ND	ND
Naphthalene	14	0	ND	ND	ND	ND
2-Methylnaphthalene	14	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	14	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	14	0	ND	ND	ND	ND
Acenaphthene	14	0	ND	ND	ND	ND
Dibenzofuran	14	0	ND	ND	ND	ND
Diethylphthalate	14	0	ND	ND	ND	ND
Fluorene	14	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	14	0	ND	ND	ND	ND
Phenanthrene	14	0	ND	ND	ND	ND
Anthracene	14	0	ND	ND	ND	ND
Di-n-butylphthalate	14	1	0.0016	0.0048	0.0016	PEK060694SWBW-08
Fluoranthene	14	0	ND	ND	ND	ND
Pyrene	14	0	ND	ND	ND	ND
Benzylbutylphthalate	14	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	14	0	ND	ND	ND	ND
Di-n-octylphthalate	14	0	ND	ND	ND	ND
Benzo(b)fluoranthene	14	0	ND	ND	ND	ND
Benzo(k)fluoranthene	14	0	ND	ND	ND	ND
Benzo(a)pyrene	14	0	ND	ND	ND	ND
Antimony	14	0	ND	ND	ND	ND
Arsenic	14	0	ND	ND	ND	ND
Barium	14	0	ND	ND	ND	ND
Beryllium	14	0	ND	ND	ND	ND
Cadmium	14	0	ND	ND	ND	ND
Calcium	14	14	7.7	8.5	11.	PEK060694SWBW-10
Chromium	14	0	ND	ND	ND	ND
Copper	14	1	0.02	0.0107	0.02	PEK060694SWBW-10
Cyanide	0	0	NA	ND	NA	NA
Iron	14	14	0.04	0.1529	0.35	PEK100394SWBW-04 (TOTAL)
Lead	14	0	ND	ND	ND	ND
Magnesium	14	14	2.3	2.6286	3.3	PEK060694SWBW-10
Manganese	14	12	0.022	0.0471	0.063	PEK060694SWBW-07
Mercury	14	6	0.005	0.0036	0.005	PEK100394SWBW-04 (TOTAL)
Nickel	14	0	ND	ND	ND	ND
Potassium	14	14	1.6	1.8857	2.7	PEK060694SWBW-10
Selenium	7	0	ND	ND	ND	ND
Silver	14	0	ND	ND	ND	ND
Sodium	14	14	5.9	10.5143	25.	PEK060694SWBW-10

TABLE 9-28
BRANCH BROOK DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Thallium	14	0	ND	ND	ND	ND
Zinc	14	13	0.01	0.0104	0.014	PEK060694SWBW-07
Vinyl acetate	14	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	14	0	ND	ND	ND	ND
N-Nitrosodimethylamine	14	0	ND	ND	ND	ND
2,6-Dichlorophenol	14	0	ND	ND	ND	ND
Cobalt	7	0	ND	ND	ND	ND
Tin	7	0	ND	ND	ND	ND
Vanadium	7	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-29
NAUGATUCK RIVER UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Delta-BHC	3	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	3	1	0.	0.0001	0.	PEK092094SWNW01
Heptaclor	3	0	ND	ND	ND	ND
Aldrin	3	0	ND	ND	ND	ND
Endosulfan I	3	0	ND	ND	ND	ND
Dieldrin	3	0	ND	ND	ND	ND
4,4'-DDE	3	0	ND	ND	ND	ND
Endosulfan II	3	0	ND	ND	ND	ND
4,4-DDT	3	0	ND	ND	ND	ND
Methoxychlor	3	0	ND	ND	ND	ND
Endrin aldehyde	3	0	ND	ND	ND	ND
Tetrachloro-m-xylene	3	3	0.0003	0.0003	0.0003	PEK092094SWNW01
Decachlorobiphenyl	3	3	0.0002	0.0002	0.0003	PEK092094SWNW01
Aroclor 1242	3	0	ND	ND	ND	ND
Aroclor 1254	3	0	ND	ND	ND	ND
Chloromethane	6	0	ND	ND	ND	ND
Bromomethane	6	0	ND	ND	ND	ND
Vinyl chloride	6	0	ND	ND	ND	ND
Chloroethane	6	0	ND	ND	ND	ND
Methylene chloride	6	2	0.0006	0.011	0.0014	PEK092094SWNW03
Acetone	6	2	0.0049	0.0154	0.0059	PEK092094SWNW03
Carbon disulfide	6	0	ND	ND	ND	ND
1,1-Dichloroethene	6	0	ND	ND	ND	ND
1,1-Dichloroethane	6	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	6	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	6	0	ND	ND	ND	ND
Chloroform	6	0	ND	ND	ND	ND
1,2-Dichloroethane	6	0	ND	ND	ND	ND
2-Butanone	6	0	ND	ND	ND	ND
1,1,1-Trichloroethane	6	0	ND	ND	ND	ND
Carbon tetrachloride	6	0	ND	ND	ND	ND
Bromodichloromethane	6	0	ND	ND	ND	ND
1,2-Dichloropropane	6	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	6	0	ND	ND	ND	ND
Trichloroethene	6	6	0.0004	0.0007	0.0009	PEK060694SWNW-03
Dibromochloromethane	6	0	ND	ND	ND	ND
1,1,2-Trichloroethane	6	0	ND	ND	ND	ND
Benzene	6	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	6	0	ND	ND	ND	ND
Bromoform	6	0	ND	ND	ND	ND
4-Methyl-2-pentanone	6	0	ND	ND	ND	ND
2-Hexanone	6	0	ND	ND	ND	ND
Tetrachloroethene	6	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	6	0	ND	ND	ND	ND
Toluene	6	0	ND	ND	ND	ND
Chlorobenzene	6	0	ND	ND	ND	ND
Ethylbenzene	6	0	ND	ND	ND	ND

TABLE 9-29
NAUGATUCK RIVER UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	6	0	ND	ND	ND	ND
Xylenes (total)	6	0	ND	ND	ND	ND
2-Chlorophenol	6	0	ND	ND	ND	ND
2,4-Dichlorophenol	6	0	ND	ND	ND	ND
Naphthalene	6	0	ND	ND	ND	ND
2-Methylnaphthalene	6	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	6	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	6	0	ND	ND	ND	ND
Acenaphthene	6	0	ND	ND	ND	ND
Dibenzofuran	6	0	ND	ND	ND	ND
Diethylphthalate	6	0	ND	ND	ND	ND
Fluorene	6	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	6	0	ND	ND	ND	ND
Phenanthrene	6	0	ND	ND	ND	ND
Anthracene	6	0	ND	ND	ND	ND
Di-n-butylphthalate	6	0	ND	ND	ND	ND
Fluoranthene	6	0	ND	ND	ND	ND
Pyrene	6	0	ND	ND	ND	ND
Benzylbutylphthalate	6	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	6	0	ND	ND	ND	ND
Di-n-octylphthalate	6	0	ND	ND	ND	ND
Benzo(b)fluoranthene	6	0	ND	ND	ND	ND
Benzo(k)fluoranthene	6	0	ND	ND	ND	ND
Benzo(a)pyrene	6	0	ND	ND	ND	ND
Antimony	6	0	ND	ND	ND	ND
Arsenic	6	0	ND	ND	ND	ND
Barium	6	0	ND	ND	ND	ND
Beryllium	6	0	ND	ND	ND	ND
Cadmium	6	0	ND	ND	ND	ND
Calcium	6	6	9.2	10.5833	12.	PEK060694SWNW-01
Chromium	6	0	ND	ND	ND	ND
Copper	6	0	ND	ND	ND	ND
Iron	6	6	0.15	0.2683	0.39	AJR100394SWNW-01 (TOTAL)
Lead	6	0	ND	ND	ND	ND
Magnesium	6	6	3.1	3.3333	3.6	PEK060694SWNW-01
Manganese	6	4	0.05	0.0715	0.061	AJR100394SWNW-03 (TOTAL)
Mercury	6	0	ND	ND	ND	ND
Nickel	6	0	ND	ND	ND	ND
Potassium	6	6	2.6	2.95	3.7	PEK060694SWNW-01
Selenium	3	0	ND	ND	ND	ND
Silver	6	0	ND	ND	ND	ND
Sodium	6	6	18.	19.8333	22.	HMH060694SWNW-02
Thallium	6	0	ND	ND	ND	ND
Zinc	6	5	0.01	0.0158	0.018	AJR100394SWNW-03 (TOTAL)
Vinyl acetate	6	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	6	0	ND	ND	ND	ND
N-Nitrosodimethylamine	6	0	ND	ND	ND	ND

TABLE 9-29
NAUGATUCK RIVER UPSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,6-Dichlorophenol	6	0	ND	ND	ND	ND
Cobalt	3	0	ND	ND	ND	ND
Tin	3	0	ND	ND	ND	ND
Vanadium	3	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-30
NAUGATUCK RIVER DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Delta-BHC	5	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	5	0	ND	ND	ND	ND
Heptaclor	5	0	ND	ND	ND	ND
Aldrin	5	0	ND	ND	ND	ND
Endosulfan I	5	0	ND	ND	ND	ND
Dieldrin	5	0	ND	ND	ND	ND
4,4'-DDE	5	0	ND	ND	ND	ND
Endosulfan II	5	0	ND	ND	ND	ND
4,4-DDT	5	0	ND	ND	ND	ND
Methoxychlor	5	0	ND	ND	ND	ND
Endrin aldehyde	5	0	ND	ND	ND	ND
Tetrachloro-m-xylene	5	5	0.0002	0.0003	0.0003	PEK092094SWNW06
Decachlorobiphenyl	5	5	0.0002	0.0002	0.0003	PEK092094SWNW06
Aroclor 1242	5	0	ND	ND	ND	ND
Aroclor 1254	5	0	ND	ND	ND	ND
Chloromethane	10	0	ND	ND	ND	ND
Bromomethane	10	0	ND	ND	ND	ND
Vinyl chloride	10	0	ND	ND	ND	ND
Chloroethane	10	0	ND	ND	ND	ND
Methylene chloride	10	4	0.0004	0.0086	0.0017	PEK092094SWNW06
Acetone	10	5	0.0024	0.0087	0.0066	PEK092094SWNW06
Carbon disulfide	10	0	ND	ND	ND	ND
1,1-Dichloroethene	10	0	ND	ND	ND	ND
1,1-Dichloroethane	10	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	10	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	10	0	ND	ND	ND	ND
Chloroform	10	0	ND	ND	ND	ND
1,2-Dichloroethane	10	0	ND	ND	ND	ND
2-Butanone	10	0	ND	ND	ND	ND
1,1,1-Trichloroethane	10	0	ND	ND	ND	ND
Carbon tetrachloride	10	0	ND	ND	ND	ND
Bromodichloromethane	10	0	ND	ND	ND	ND
1,2-Dichloropropane	10	0	ND	ND	ND	ND
Cis-1,3-dichloropropene	10	0	ND	ND	ND	ND
Trichloroethene	10	9	0.0004	0.0011	0.0007	HMH060694SWNW-04
Dibromochloromethane	10	0	ND	ND	ND	ND
1,1,2-Trichloroethane	10	0	ND	ND	ND	ND
Benzene	10	0	ND	ND	ND	ND
Trans-1,3-dichloropropene	10	0	ND	ND	ND	ND
Bromoform	10	0	ND	ND	ND	ND
4-Methyl-2-pentanone	10	0	ND	ND	ND	ND
2-Hexanone	10	0	ND	ND	ND	ND
Tetrachloroethene	10	3	0.0003	0.0122	0.0007	PEK092094SWNW07
1,1,2,2-Tetrachloroethane	10	0	ND	ND	ND	ND
Toluene	10	0	ND	ND	ND	ND
Chlorobenzene	10	0	ND	ND	ND	ND
Ethylbenzene	10	0	ND	ND	ND	ND

TABLE 9-30
NAUGATUCK RIVER DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	10	0	ND	ND	ND	ND
Xylenes (total)	10	0	ND	ND	ND	ND
2-Chlorophenol	10	0	ND	ND	ND	ND
2,4-Dichlorophenol	10	0	ND	ND	ND	ND
Naphthalene	10	0	ND	ND	ND	ND
2-Methylnaphthalene	10	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	10	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	10	0	ND	ND	ND	ND
Acenaphthene	10	0	ND	ND	ND	ND
Dibenzofuran	10	0	ND	ND	ND	ND
Diethylphthalate	10	0	ND	ND	ND	ND
Fluorene	10	0	ND	ND	ND	ND
N-Nitrosodiphenylamine	10	0	ND	ND	ND	ND
Phenanthrene	10	0	ND	ND	ND	ND
Anthracene	10	0	ND	ND	ND	ND
Di-n-butylphthalate	10	2	0.0013	0.0213	0.0013	HMH060694SWNW-07
Fluoranthene	10	0	ND	ND	ND	ND
Pyrene	10	0	ND	ND	ND	ND
Benzylbutylphthalate	10	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	10	1	0.0022	0.0472	0.0022	HMH060694SWNW-07
Di-n-octylphthalate	10	0	ND	ND	ND	ND
Benzo(b)fluoranthene	10	0	ND	ND	ND	ND
Benzo(k)fluoranthene	10	0	ND	ND	ND	ND
Benzo(a)pyrene	10	0	ND	ND	ND	ND
Antimony	10	0	ND	ND	ND	ND
Arsenic	10	0	ND	ND	ND	ND
Barium	10	0	ND	ND	ND	ND
Beryllium	10	0	ND	ND	ND	ND
Cadmium	10	0	ND	ND	ND	ND
Calcium	10	10	8.8	10.37	13.	HMH060694SWNW-07
Chromium	10	0	ND	ND	ND	ND
Copper	10	0	ND	ND	ND	ND
Iron	10	10	0.12	0.277	0.39	AJR100394SWNW-06 (TOTAL)
Lead	10	0	ND	ND	ND	ND
Magnesium	10	10	3.1	3.34	3.7	HMH060694SWNW-07
Manganese	10	6	0.041	0.0694	0.069	AJR100394SWNW-07 (TOTAL)
Mercury	10	0	ND	ND	ND	ND
Nickel	10	0	ND	ND	ND	ND
Potassium	10	10	2.5	3.35	4.7	HMH060694SWNW-07
Selenium	5	0	ND	ND	ND	ND
Silver	10	0	ND	ND	ND	ND
Sodium	10	10	16.	20.1	29.	HMH060694SWNW-07
Thallium	10	0	ND	ND	ND	ND
Zinc	10	8	0.014	0.0184	0.021	AJR100394SWNW-08 (TOTAL)
Vinyl acetate	10	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	10	0	ND	ND	ND	ND
N-Nitrosodimethylamine	10	0	ND	ND	ND	ND

TABLE 9-30
NAUGATUCK RIVER DOWNSTREAM SURFACE WATER ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2,6-Dichlorophenol	10	0	ND	ND	ND	ND
Cobalt	5	0	ND	ND	ND	ND
Tin	5	0	ND	ND	ND	ND
Vanadium	5	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-31
BRANCH BROOK UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	4	0	ND	ND	ND	ND
2,4-Dichlorophenol	4	0	ND	ND	ND	ND
Naphthalene	4	0	ND	ND	ND	ND
2-Methylnaphthalene	4	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	4	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	4	0	ND	ND	ND	ND
Acenaphthene	4	1	0.062	0.1393	0.062	PEK940620SDBBI04
Dibenzofuran	4	1	0.042	0.1343	0.042	PEK940620SDBBI04
Diethylphthalate	4	3	0.026	0.0723	0.07	PEK940620SDBBI04
Fluorene	4	1	0.05	0.1363	0.05	PEK940620SDBBI04
N-Nitrosodiphenylamine	4	0	ND	ND	ND	ND
Phenanthrene	4	2	0.2	0.21	0.31	PEK940620SDBBI04
Anthracene	4	1	0.052	0.1368	0.052	PEK940620SDBBI04
Di-n-butylphthalate	4	4	0.14	0.1775	0.22	PEK940620SDBBI04
Fluoranthene	4	3	0.046	0.3478	0.6	PEK941006SDBBI04
Pyrene	4	4	0.038	0.3703	0.93	PEK940620SDBBI04
Butylbenzylphthalate	4	1	0.13	0.1563	0.13	PEK940620SDBBI04
Bis(2-ethylhexyl)phthalate	4	1	0.13	0.1563	0.13	PEK940620SDBBI04
Di-n-octylphthalate	4	0	ND	ND	ND	ND
Benzo(b)fluoranthene	4	1	0.18	0.1688	0.18	PEK941006SDBBI04
Benzo(k)fluoranthene	4	1	0.18	0.1688	0.18	PEK941006SDBBI04
Benzo(a)pyrene	4	1	0.19	0.1713	0.19	PEK941006SDBBI04
N-Nitrosodimethylamine	4	0	ND	ND	ND	ND
2,6-Dichlorophenol	4	0	ND	ND	ND	ND
Antimony	2	0	ND	ND	ND	ND
Arsenic	2	0	ND	ND	ND	ND
Barium	2	2	29.	214.5	400.	PEK940620SDBBI04
Beryllium	2	0	ND	ND	ND	ND
Cadmium	2	0	ND	ND	ND	ND
Chromium	2	2	8.8	10.9	13.	PEK940620SDBBI04
Cobalt	2	2	6.	6.8	7.6	PEK940620SDBBI04
Copper	2	2	6.6	9.3	12.	PEK940620SDBBI04
Lead	2	2	1.6	205.8	410.	PEK940620SDBBI04
Mercury	2	0	ND	ND	ND	ND
Nickel	2	1	12.	6.15	12.	PEK940620SDBBI02
Silver	2	0	ND	ND	ND	ND
Thallium	2	0	ND	ND	ND	ND
Tin	2	0	ND	ND	ND	ND
Vanadium	2	0	ND	ND	ND	ND
Zinc	2	2	22.	96.	170.	PEK940620SDBBI04
Beta-BHC	2	0	ND	ND	ND	ND
Delta-BHC	2	0	ND	ND	ND	ND
Heptachlor	2	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	2	0	ND	ND	ND	ND

TABLE 9-31
BRANCH BROOK UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Methoxychlor	2	0	ND	ND	ND	ND
Aldrin	2	1	0.0013	0.0029	0.0013	HMH941006SDBBI02
Endosulfan I	2	0	ND	ND	ND	ND
Dieldrin	2	0	ND	ND	ND	ND
4,4'-DDE	2	0	ND	ND	ND	ND
Endosulfan II	2	0	ND	ND	ND	ND
4,4-DDT	2	0	ND	ND	ND	ND
Endrin aldehyde	2	0	ND	ND	ND	ND
Aroclor 1242	2	0	ND	ND	ND	ND
Aroclor 1254	2	0	ND	ND	ND	ND
Tetrachloro-m-xylene	2	2	0.019	0.019	0.019	HMH941006SDBBI02
Decachlorobiphenyl	2	2	0.023	0.0235	0.024	HMH941006SDBBI02
Vinyl acetate	4	0	ND	ND	ND	ND
Chloromethane	4	0	ND	ND	ND	ND
Bromomethane	4	0	ND	ND	ND	ND
Vinyl chloride	4	0	ND	ND	ND	ND
Chloroethane	4	0	ND	ND	ND	ND
Methylene chloride	4	4	0.0074	0.0089	0.012	PEK940620SDBBI02
Acetone	4	1	0.0064	0.0054	0.0064	PEK940620SDBBI04
Carbon disulfide	4	0	ND	ND	ND	ND
1,1-Dichloroethene	4	0	ND	ND	ND	ND
1,1-Dichloroethane	4	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	4	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	4	0	ND	ND	ND	ND
Chloroform	4	3	0.0008	0.0019	0.001	HMH941006SDBBI02
1,2-Dichloroethane	4	0	ND	ND	ND	ND
2-Butanone	4	0	ND	ND	ND	ND
1,1,1-Trichloroethane	4	0	ND	ND	ND	ND
Carbon tetrachloride	4	0	ND	ND	ND	ND
Bromodichloromethane	4	0	ND	ND	ND	ND
1,2-Dichloropropane	4	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	4	0	ND	ND	ND	ND
Trichloroethene	4	0	ND	ND	ND	ND
Dibromochloromethane	4	0	ND	ND	ND	ND
1,1,2-Trichloroethane	4	0	ND	ND	ND	ND
Benzene	4	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	4	0	ND	ND	ND	ND
Bromoform	4	0	ND	ND	ND	ND
2-Hexanone	4	0	ND	ND	ND	ND
4-Methyl-2-pentanone	4	0	ND	ND	ND	ND
Tetrachloroethene	4	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	4	0	ND	ND	ND	ND
Toluene	4	0	ND	ND	ND	ND
Chlorobenzene	4	0	ND	ND	ND	ND

TABLE 9-31
BRANCH BROOK UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Ethylbenzene	4	0	ND	ND	ND	ND
Styrene	4	0	ND	ND	ND	ND
Xylenes (total)	4	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	4	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-32
BRANCH BROOK DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	18	0	ND	ND	ND	ND
2,4-Dichlorophenol	18	0	ND	ND	ND	ND
Naphthalene	18	0	ND	ND	ND	ND
2-Methylnaphthalene	18	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	18	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	18	0	ND	ND	ND	ND
Acenaphthene	18	0	ND	ND	ND	ND
Dibenzofuran	18	0	ND	ND	ND	ND
Diethylphthalate	18	12	0.026	0.3145	2.	HMH941006SDBBI24
4-Chlorophenyl phenyl ether	0	0	NA	ND	NA	NA
Fluorene	18	0	ND	ND	ND	ND
4-Nitroaniline	0	0	NA	ND	NA	NA
N-Nitrosodiphenylamine	18	0	ND	ND	ND	ND
Phenanthrene	18	8	0.026	0.1679	0.49	PEK940620SDTBB04
Anthracene	18	4	0.019	0.1387	0.11	PEK940620SDTBB04
Di-n-butylphthalate	18	17	0.099	0.2352	1.4	HMH941006SDBBI24
Fluoranthene	18	9	0.022	0.3482	1.6	HMH941006SDBBI17
Pyrene	18	8	0.047	0.2898	1.4	HMH941006SDBBI17
Butylbenzylphthalate	18	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	18	2	0.14	0.18	0.46	PEK940620SDBBI17
Di-n-octylphthalate	18	0	ND	ND	ND	ND
Benzo(b)fluoranthene	18	8	0.055	0.169	0.57	HMH941006SDBBI17
Benzo(k)fluoranthene	18	8	0.044	0.1708	0.55	HMH941006SDBBI17
Benzo(a)pyrene	18	6	0.065	0.1724	0.6	HMH941006SDBBI17
N-Nitrosodimethylamine	18	0	ND	ND	ND	ND
2,6-Dichlorophenol	18	0	ND	ND	ND	ND
Antimony	9	0	ND	ND	ND	ND
Arsenic	9	1	1.	0.5556	1.	PEK940620SDBBI17
Barium	9	9	18.	25.4444	38.	PEK940620SDBBI17
Beryllium	9	0	ND	ND	ND	ND
Cadmium	9	0	ND	ND	ND	ND
Chromium	9	9	5.	8.7333	16.	PEK940620SDBBI17
Cobalt	9	9	4.4	6.4444	8.8	PEK940620SDTBB03
Copper	9	9	8.	12.0889	17.	PEK940620SDBBI17
Lead	9	7	1.2	4.4	9.8	PEK940620SDTBB03
Mercury	9	0	ND	ND	ND	ND
Nickel	9	9	7.8	10.0667	13.	PEK940620SDBBI17
Silver	9	0	ND	ND	ND	ND
Thallium	9	0	ND	ND	ND	ND
Tin	9	0	ND	ND	ND	ND
Vanadium	9	0	ND	ND	ND	ND
Zinc	9	9	17.	27.5556	44.	PEK940620SDTBB03
Beta-BHC	9	0	ND	ND	ND	ND
Delta-BHC	9	0	ND	ND	ND	ND
Heptachlor	9	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	9	0	ND	ND	ND	ND

TABLE 9-32
BRANCH BROOK DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Methoxychlor	9	2	0.0037	0.004	0.0091	HMH941006SDBBI17
Aldrin	9	4	0.0018	0.0063	0.021	HMH941006SDBBI17
Endosulfan I	9	0	ND	ND	ND	ND
Dieldrin	9	1	0.0267	0.0049	0.0267	HMH941006SDTBB03
4,4'-DDE	9	0	ND	ND	ND	ND
Endosulfan II	9	0	ND	ND	ND	ND
4,4-DDT	9	1	0.0079	0.0094	0.0079	PEK941006SDBBI12
Endrin aldehyde	9	0	ND	ND	ND	ND
Aroclor 1242	9	0	ND	ND	ND	ND
Aroclor 1248	0	0	NA	ND	NA	NA
Aroclor 1254	9	0	ND	ND	ND	ND
Tetrachloro-m-xylene	9	9	0.017	0.0184	0.021	HMH941006SDBBI17
Decachlorobiphenyl	9	9	0.021	0.0251	0.033	HMH941006SDBBI24
Vinyl acetate	18	0	ND	ND	ND	ND
Chloromethane	18	0	ND	ND	ND	ND
Bromomethane	18	0	ND	ND	ND	ND
Vinyl chloride	18	0	ND	ND	ND	ND
Chloroethane	18	0	ND	ND	ND	ND
Methylene chloride	18	18	0.0026	0.0087	0.016	HMH941006SDBBI17
Acetone	18	12	0.0018	0.0094	0.037	HMH941006SDBBI17
Carbon disulfide	18	0	ND	ND	ND	ND
1,1-Dichloroethene	18	0	ND	ND	ND	ND
1,1-Dichloroethane	18	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	18	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	18	1	0.0011	0.0048	0.0011	PEK940620SDBBI12
Chloroform	18	15	0.0004	0.0016	0.0017	HMH941006SDBBI24
1,2-Dichloroethane	18	0	ND	ND	ND	ND
2-Butanone	18	3	0.0012	0.0049	0.0083	PEK940620SDBBI17
1,1,1-Trichloroethane	18	0	ND	ND	ND	ND
Carbon tetrachloride	18	0	ND	ND	ND	ND
Bromodichloromethane	18	0	ND	ND	ND	ND
1,2-Dichloropropane	18	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	18	0	ND	ND	ND	ND
Trichloroethene	18	1	0.0013	0.0048	0.0013	PEK940620SDBBI12
Dibromochloromethane	18	0	ND	ND	ND	ND
1,1,2-Trichloroethane	18	0	ND	ND	ND	ND
Benzene	18	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	18	0	ND	ND	ND	ND
Bromoform	18	0	ND	ND	ND	ND
2-Hexanone	18	0	ND	ND	ND	ND
4-Methyl-2-pentanone	18	0	ND	ND	ND	ND
Tetrachloroethene	18	1	0.003	0.0049	0.003	PEK940620SDBBI12
1,1,2,2-Tetrachloroethane	18	0	ND	ND	ND	ND
Toluene	18	0	ND	ND	ND	ND
Chlorobenzene	18	0	ND	ND	ND	ND
Ethylbenzene	18	0	ND	ND	ND	ND

TABLE 9-32
BRANCH BROOK DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Styrene	18	0	ND	ND	ND	ND
Xylenes (total)	18	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	18	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-33
NAUGATUCK RIVER UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	7	0	ND	ND	ND	ND
2,4-Dichlorophenol	7	0	ND	ND	ND	ND
Naphthalene	7	0	ND	ND	ND	ND
2-Methylnaphthalene	7	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	7	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	7	1	0.3	0.1843	0.3	PEK940621SDNRI11
Acenaphthene	7	1	0.064	0.1506	0.064	PEK940620SDTNRI02
4-Nitrophenol	0	0	NA	ND	NA	NA
Dibenzofuran	7	1	0.033	0.1461	0.033	PEK940620SDTNRI02
Diethylphthalate	7	1	0.038	0.1469	0.038	PEK940620SDTNRI02
Fluorene	7	4	0.061	0.1234	0.15	PEK940620SDTNRI02
N-Nitrosodiphenylamine	7	0	ND	ND	ND	ND
Phenanthrene	7	6	0.26	1.0736	3.	PEK940620SDTNRI02
Anthracene	7	1	0.42	0.2014	0.42	PEK940620SDTNRI02
Di-n-butylphthalate	7	6	0.082	0.1867	0.39	HMH941007SDNRI11
Fluoranthene	7	7	0.57	2.71	8.	PEK940620SDTNRI02
Pyrene	7	7	0.14	1.4571	2.9	PEK940620SDTNRI02
Butylbenzylphthalate	7	1	0.13	0.16	0.13	HMH941007SDTNR02
Bis(2-ethylhexyl)phthalate	7	3	0.07	0.1586	0.22	PEK940620SDTNRI02
Di-n-octylphthalate	7	0	ND	ND	ND	ND
Benzo(b)fluoranthene	7	7	0.19	0.7657	1.8	PEK940620SDTNRI02
Benzo(k)fluoranthene	7	7	0.21	0.7729	2.1	PEK940620SDTNRI02
Benzo(a)pyrene	7	7	0.1	0.6186	1.5	PEK940620SDTNRI02
N-Nitrosodimethylamine	7	0	ND	ND	ND	ND
2,6-Dichlorophenol	7	0	ND	ND	ND	ND
Antimony	4	0	ND	ND	ND	ND
Arsenic	4	0	ND	ND	ND	ND
Barium	4	4	24.	31.	41.	PEK940620SDTNRI02
Beryllium	4	0	ND	ND	ND	ND
Cadmium	4	1	1.1	0.35	1.1	PEK940620SDTNRI02
Chromium	4	4	12.	15.75	25.	PEK940620SDTNRI02
Cobalt	4	4	3.8	4.65	5.6	PEK940620SDTNRI02
Copper	4	4	28.	46.75	92.	PEK940620SDTNRI02
Lead	4	4	7.2	15.55	29.	PEK940620SDTNRI02
Mercury	4	0	ND	ND	ND	ND
Nickel	4	4	7.	9.	13.	PEK940620SDTNRI02
Silver	4	0	ND	ND	ND	ND
Thallium	4	0	ND	ND	ND	ND
Tin	4	0	ND	ND	ND	ND
Vanadium	4	0	ND	ND	ND	ND
Zinc	4	4	62.	94.5	170.	PEK940620SDTNRI02
Potassium	0	0	NA	ND	NA	NA
Alpha-BHC	0	0	NA	ND	NA	NA
Beta-BHC	4	0	ND	ND	ND	ND
Delta-BHC	4	0	ND	ND	ND	ND
Chlordane	0	0	NA	ND	NA	NA
Toxaphene	0	0	NA	ND	NA	NA

TABLE 9-33
NAUGATUCK RIVER UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endrin	0	0	NA	ND	NA	NA
Heptachlor	4	1	0.0006	0.0002	0.0006	HMH941007SDNRI11
Heptachlor epoxide	0	0	NA	ND	NA	NA
Gamma-BHC (Lindane)	4	0	ND	ND	ND	ND
Methoxychlor	4	0	ND	ND	ND	ND
Aldrin	4	0	ND	ND	ND	ND
Endosulfan I	4	0	ND	ND	ND	ND
Dieldrin	4	0	ND	ND	ND	ND
4,4'-DDE	4	0	ND	ND	ND	ND
Endosulfan II	4	0	ND	ND	ND	ND
4,4'-DDD	0	0	NA	ND	NA	NA
Endosulfan sulfate	0	0	NA	ND	NA	NA
4,4-DDT	4	0	ND	ND	ND	ND
Endrin ketone	0	0	NA	ND	NA	NA
Endrin aldehyde	4	0	ND	ND	ND	ND
Aroclor 1016	0	0	NA	ND	NA	NA
Aroclor 1221	0	0	NA	ND	NA	NA
Aroclor 1232	0	0	NA	ND	NA	NA
Aroclor 1242	4	0	ND	ND	ND	ND
Aroclor 1248	0	0	NA	ND	NA	NA
Aroclor 1254	4	0	ND	ND	ND	ND
Aroclor 1260	0	0	NA	ND	NA	NA
Tetrachloro-m-xylene	4	4	0.012	0.0168	0.02	HMH941007SDNRI11
Decachlorobiphenyl	4	4	0.0055	0.0141	0.018	HMH941007SDNRI11
Vinyl acetate	8	0	ND	ND	ND	ND
Chloromethane	8	0	ND	ND	ND	ND
Bromomethane	8	0	ND	ND	ND	ND
Vinyl chloride	8	0	ND	ND	ND	ND
Chloroethane	8	0	ND	ND	ND	ND
Methylene chloride	8	8	0.0045	0.0053	0.007	HMH941007SDNRI11
Acetone	8	6	0.0064	0.0111	0.037	PEK940620SDTNRI02
Carbon disulfide	8	0	ND	ND	ND	ND
1,1-Dichloroethene	8	0	ND	ND	ND	ND
1,1-Dichloroethane	8	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	8	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	8	0	ND	ND	ND	ND
Chloroform	8	4	0.0008	0.0031	0.0018	HMH941007SDNRI11
1,2-Dichloroethane	8	0	ND	ND	ND	ND
2-Butanone	8	4	0.0012	0.0042	0.0088	PEK940620SDTNRI02
1,1,1-Trichloroethane	8	0	ND	ND	ND	ND
Carbon tetrachloride	8	0	ND	ND	ND	ND
Bromodichloromethane	8	0	ND	ND	ND	ND
1,2-Dichloropropane	8	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	8	0	ND	ND	ND	ND
Trichloroethene	8	0	ND	ND	ND	ND
Dibromochloromethane	8	0	ND	ND	ND	ND
1,1,2-Trichloroethane	8	0	ND	ND	ND	ND

TABLE 9-33
NAUGATUCK RIVER UPSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Benzene	8	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	8	0	ND	ND	ND	ND
Bromoform	8	0	ND	ND	ND	ND
2-Hexanone	8	0	ND	ND	ND	ND
4-Methyl-2-pentanone	8	0	ND	ND	ND	ND
Tetrachloroethene	8	0	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	8	0	ND	ND	ND	ND
Toluene	8	0	ND	ND	ND	ND
Chlorobenzene	8	0	ND	ND	ND	ND
Ethylbenzene	8	0	ND	ND	ND	ND
Styrene	8	0	ND	ND	ND	ND
Xylenes (total)	8	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	8	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-34
NAUGATUCK RIVER DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
2-Chlorophenol	9	0	ND	ND	ND	ND
2,4-Dichlorophenol	9	0	ND	ND	ND	ND
Naphthalene	9	1	0.021	0.149	0.021	HMH941007SDTNR04
2-Methylnaphthalene	9	0	ND	ND	ND	ND
2,4,6-Trichlorophenol	9	0	ND	ND	ND	ND
2,4,5-Trichlorophenol	9	0	ND	ND	ND	ND
Acenaphthene	9	1	0.034	0.1504	0.034	HMH941007SDTNR04
4-Nitrophenol	0	0	NA	ND	NA	NA
Dibenzofuran	9	2	0.009	0.1323	0.027	HMH941007SDTNR04
Diethylphthalate	9	0	ND	ND	ND	ND
Fluorene	9	8	0.022	0.0573	0.057	HMH941007SDTNR04
N-Nitrosodiphenylamine	9	0	ND	ND	ND	ND
Phenanthrene	9	9	0.12	1.0167	1.8	PEK940621SDNRI13
Anthracene	9	5	0.092	0.1527	0.21	PEK940621SDNRI18
Di-n-butylphthalate	9	9	0.009	0.1542	0.4	PEK941007SDNRI20
Fluoranthene	9	9	0.33	2.8478	5.6	PEK940621SDNRI18
Pyrene	9	9	0.2	1.4167	2.3	PEK940621SDNRI13
Butylbenzylphthalate	9	0	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	9	3	0.067	0.2041	0.48	PEK940621SDNRI20
Di-n-octylphthalate	9	0	ND	ND	ND	ND
Benzo(b)fluoranthene	9	9	0.14	1.0922	2.4	PEK940621SDNRI18
Benzo(k)fluoranthene	9	9	0.06	1.0122	2.2	PEK940621SDNRI18
Benzo(a)pyrene	9	9	0.14	0.8556	1.6	PEK940621SDNRI18
N-Nitrosodimethylamine	9	0	ND	ND	ND	ND
2,6-Dichlorophenol	9	0	ND	ND	ND	ND
Antimony	5	0	ND	ND	ND	ND
Arsenic	5	1	0.43	0.486	0.43	HMH941007SDTNR04
Barium	5	5	23.	32.02	38.	PEK940621SDNRI18
Beryllium	5	0	ND	ND	ND	ND
Cadmium	5	4	0.22	0.495	1.1	PEK940621SDNRI13
Chromium	5	5	12.	32.26	78.3	HMH941007SDTNR04
Cobalt	5	5	2.1	4.22	7.4	PEK940621SDNRI18
Copper	5	5	34.	71.4	101.	HMH941007SDTNR04
Lead	5	5	11.	17.62	21.	PEK940621SDNRI18
Mercury	5	0	ND	ND	ND	ND
Nickel	5	5	7.8	13.	22.	PEK940621SDNRI20
Silver	5	3	0.6	0.9	2.2	PEK940621SDNRI20
Thallium	5	0	ND	ND	ND	ND
Tin	5	0	ND	ND	ND	ND
Vanadium	5	1	7.	9.4	7.	HMH941007SDTNR04
Zinc	5	5	80.	106.2	140.	PEK940621SDNRI18
Potassium	1	1	770.	770.	770.	HMH941007SDTNR04
Alpha-BHC	1	0	ND	ND	ND	ND
Beta-BHC	5	0	ND	ND	ND	ND
Delta-BHC	5	0	ND	ND	ND	ND
Chlordane	1	0	ND	ND	ND	ND
Toxaphene	1	0	ND	ND	ND	ND

TABLE 9-34
NAUGATUCK RIVER DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Endrin	1	0	ND	ND	ND	ND
Heptachlor	5	1	0.0003	0.0006	0.0003	HMH941007SDTNR04
Heptachlor epoxide	1	0	ND	ND	ND	ND
Gamma-BHC (Lindane)	5	0	ND	ND	ND	ND
Methoxychlor	5	1	0.0066	0.0086	0.0066	PEK941007SDNRI20
Aldrin	5	0	ND	ND	ND	ND
Endosulfan I	5	0	ND	ND	ND	ND
Dieldrin	5	1	0.0036	0.0029	0.0036	HMH941007SDTNR04
4,4'-DDE	5	0	ND	ND	ND	ND
Endosulfan II	5	0	ND	ND	ND	ND
4,4'-DDD	1	0	ND	ND	ND	ND
Endosulfan sulfate	1	0	ND	ND	ND	ND
4,4-DDT	5	0	ND	ND	ND	ND
Endrin ketone	1	0	ND	ND	ND	ND
Endrin aldehyde	5	0	ND	ND	ND	ND
Aroclor 1016	1	0	ND	ND	ND	ND
Aroclor 1221	1	0	ND	ND	ND	ND
Aroclor 1232	1	0	ND	ND	ND	ND
Aroclor 1242	5	0	ND	ND	ND	ND
Aroclor 1248	1	0	ND	ND	ND	ND
Aroclor 1254	5	0	ND	ND	ND	ND
Aroclor 1260	1	0	ND	ND	ND	ND
Tetrachloro-m-xylene	4	4	0.017	0.0178	0.019	PEK941007SDTNRI13
Decachlorobiphenyl	4	4	0.014	0.016	0.017	PEK941007SDTNRI13
Vinyl acetate	9	0	ND	ND	ND	ND
Chloromethane	9	0	ND	ND	ND	ND
Bromomethane	9	0	ND	ND	ND	ND
Vinyl chloride	9	0	ND	ND	ND	ND
Chloroethane	9	0	ND	ND	ND	ND
Methylene chloride	9	9	0.0053	0.0143	0.04	HMH941007SDTNR04
Acetone	9	6	0.0019	0.0058	0.011	PEK940621SDTNR04
Carbon disulfide	9	0	ND	ND	ND	ND
1,1-Dichloroethene	9	0	ND	ND	ND	ND
1,1-Dichloroethane	9	0	ND	ND	ND	ND
Trans-1,2-Dichloroethene	9	0	ND	ND	ND	ND
Cis-1,2-Dichloroethene	9	0	ND	ND	ND	ND
Chloroform	9	5	0.0012	0.0077	0.036	PEK941007SDNRI20
1,2-Dichloroethane	9	0	ND	ND	ND	ND
2-Butanone	9	1	0.0012	0.0046	0.0012	PEK940621SDNRI20
1,1,1-Trichloroethane	9	0	ND	ND	ND	ND
Carbon tetrachloride	9	0	ND	ND	ND	ND
Bromodichloromethane	9	1	0.0021	0.0044	0.0021	PEK941007SDNRI20
1,2-Dichloropropane	9	0	ND	ND	ND	ND
Trans-1,3-Dichloropropene	9	0	ND	ND	ND	ND
Trichloroethene	9	0	ND	ND	ND	ND
Dibromochloromethane	9	0	ND	ND	ND	ND
1,1,2-Trichloroethane	9	0	ND	ND	ND	ND

TABLE 9-34
NAUGATUCK RIVER DOWNSTREAM SEDIMENT ANALYTICAL DATA SUMMARY
Envirite Facility
Thomaston, Connecticut

Constituent	Total Number of Samples	Number of Detects	Minimum	Mean	Maximum	Location of Maximum
Benzene	9	0	ND	ND	ND	ND
Cis-1,3-Dichloropropene	9	0	ND	ND	ND	ND
Bromoform	9	0	ND	ND	ND	ND
2-Hexanone	9	0	ND	ND	ND	ND
4-Methyl-2-pentanone	9	0	ND	ND	ND	ND
Tetrachloroethene	9	1	0.0015	0.0043	0.0015	PEK941007SDTNRI13
1,1,2,2-Tetrachloroethane	9	0	ND	ND	ND	ND
Toluene	9	0	ND	ND	ND	ND
Chlorobenzene	9	0	ND	ND	ND	ND
Ethylbenzene	9	0	ND	ND	ND	ND
Styrene	9	0	ND	ND	ND	ND
Xylenes (total)	9	0	ND	ND	ND	ND
2-Chloroethyl vinyl ether	9	0	ND	ND	ND	ND

Notes:

1. Laboratory reports for analytical data summarized on this table are provided in Appendix G.
2. Mean values were calculated using one-half the quantitation limit for non-detects. This may result in a "mean" value that exceeds the maximum value in some areas.
3. Refer to sample number key (Table (9-35) to identify the location of maximum. In the event that two or more values tied for maximum, only one location is indicated.

TABLE 9-35
SAMPLE IDENTIFICATION KEY
Envirite Facility
Thomaston, Connecticut

Each sample was assigned a unique identifier in the following general format:

Sample ID:	ABC	940101	SL	L03	A
Section:	1	2	3	4	5

SECTION	FORMAT	IDENTIFIES
1	ABC	Sampler's Initials
2	940101	Date of Sample Collection
3	SL	Sample Medium: SL = Soil SD = Sediment SW = Surface Water WP = Waste Pile Material PZ = Piezometer
4	L03	Sample location numbered sequentially within each subarea: L = Landfill W = Waste Pile R = Roadway Areas F = Storage and Treatment Facility T = Underground Spill Containment Tanks G = General Facility D = Drywell B = Background BB = Branch Brook (sediment) NR = Naugatuck River (sediment) BW = Branch Brook (water) NW = Naugatuck River (water)
5	A	Sample Depth